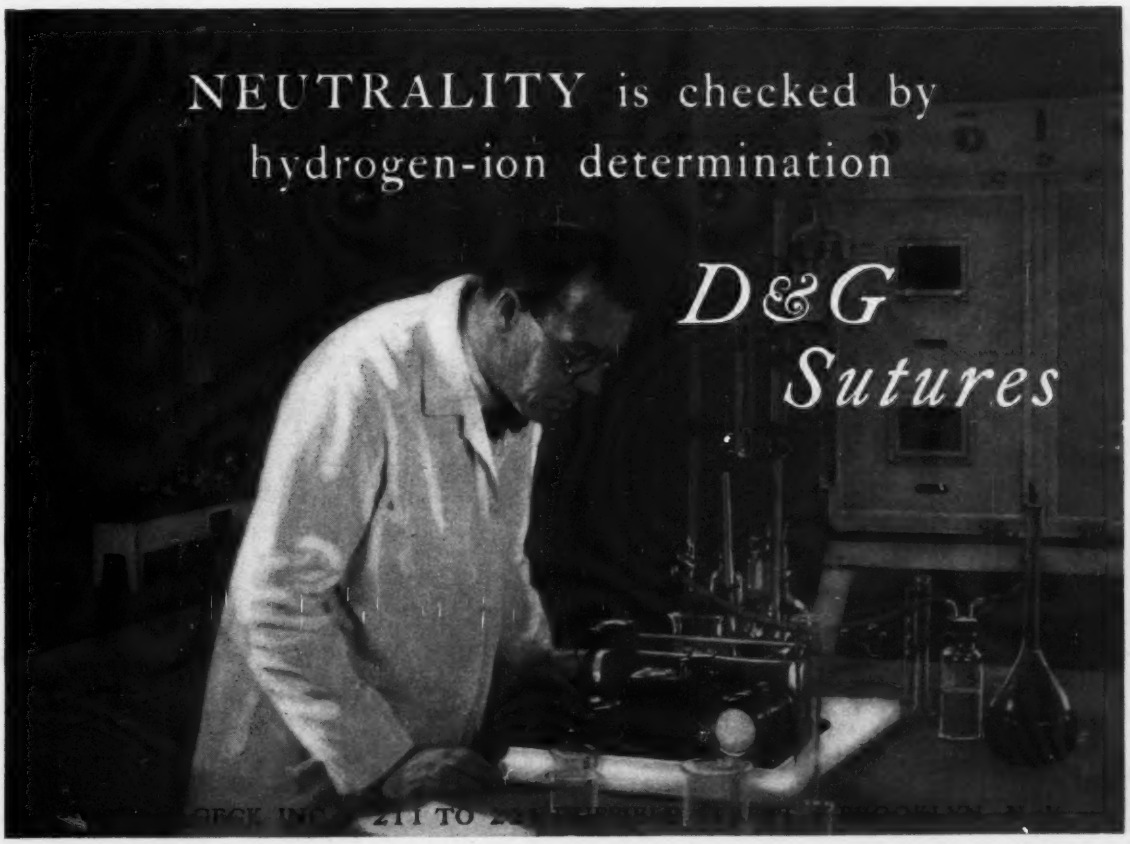
THE Canadian Hospital

A Monthly Journal for Hospital Executives

Toronto, Can. | ***The Edwards Publishing Company*** | March, 1929



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What is Real Laundry Economy?

Patient Types . . .

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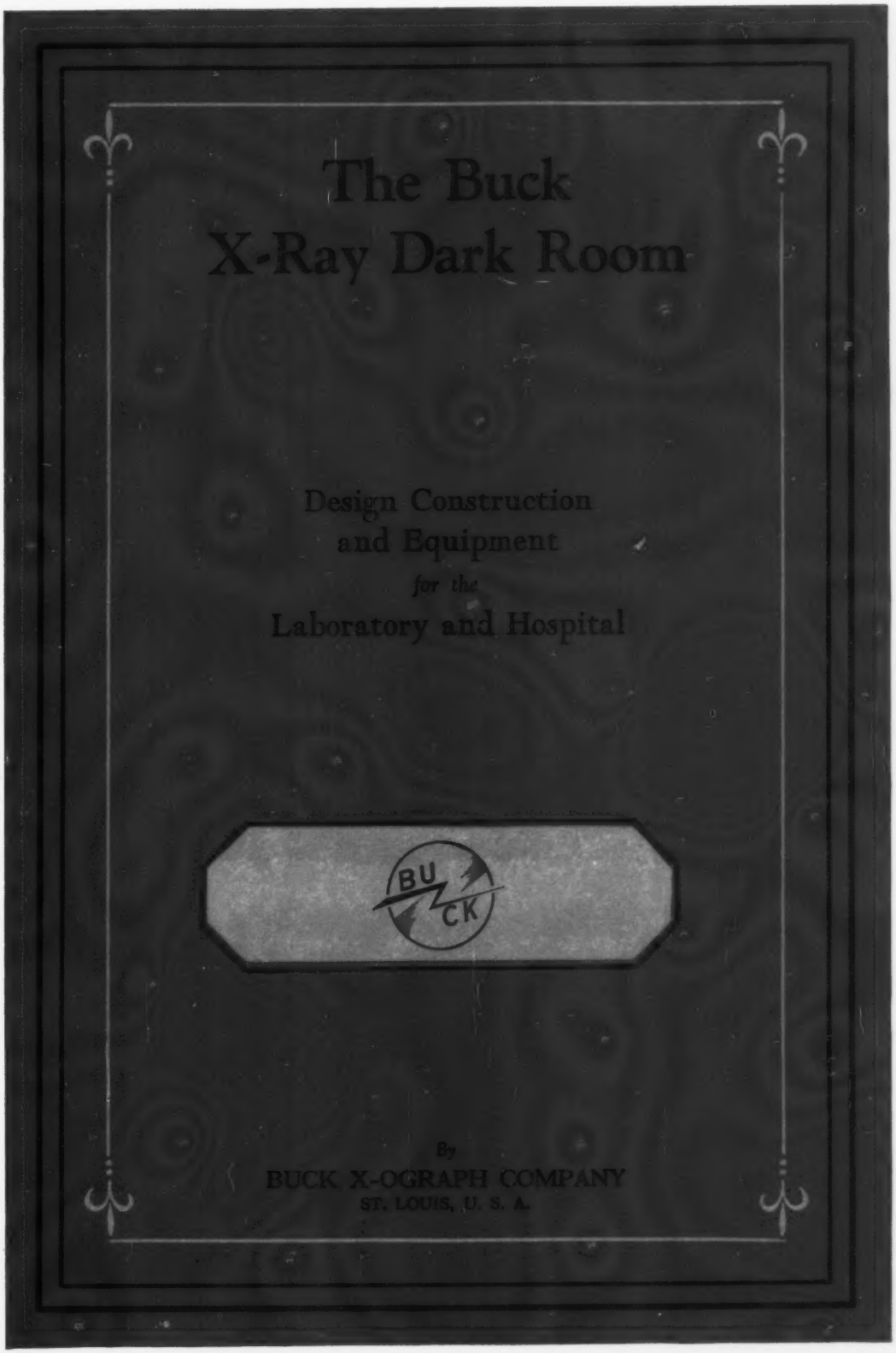

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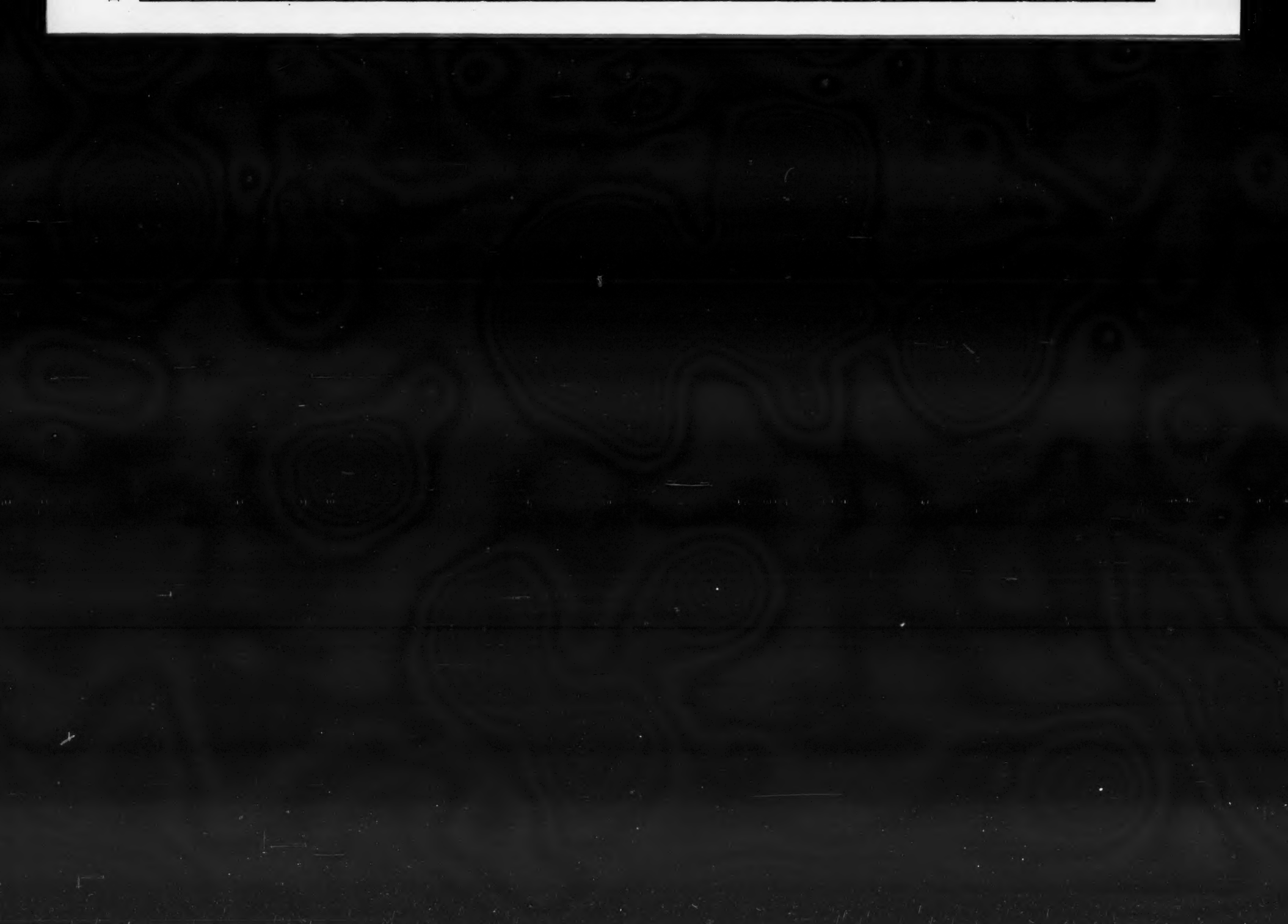

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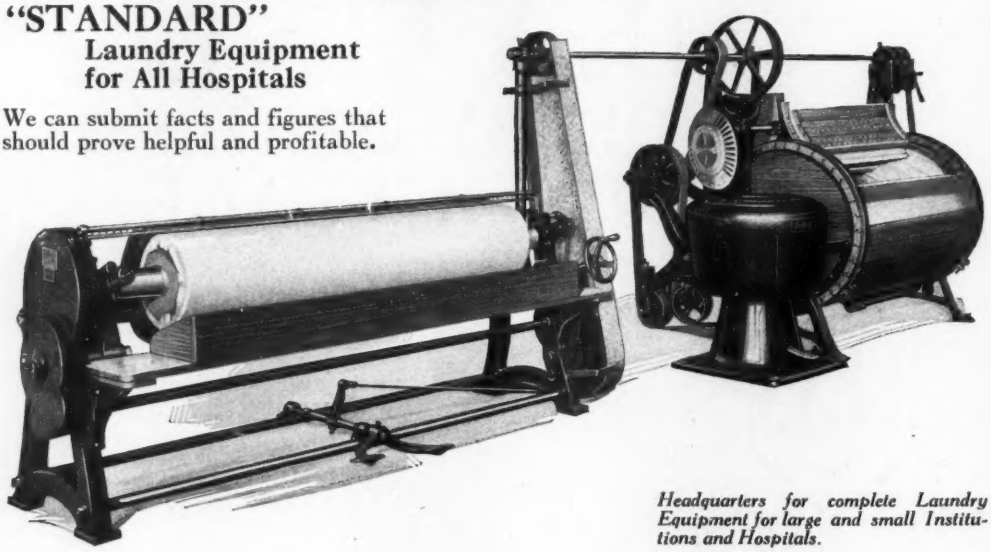

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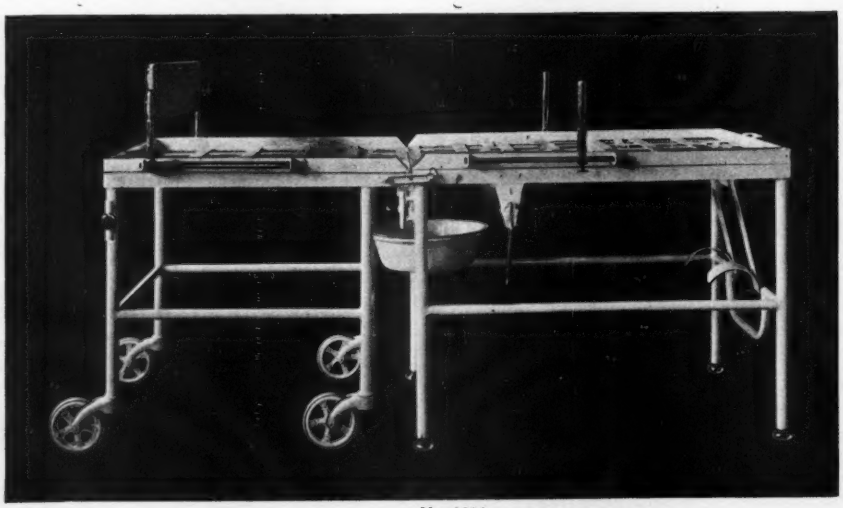

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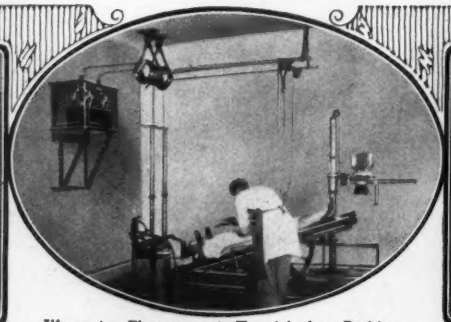

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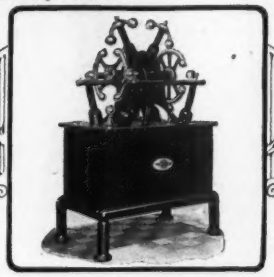

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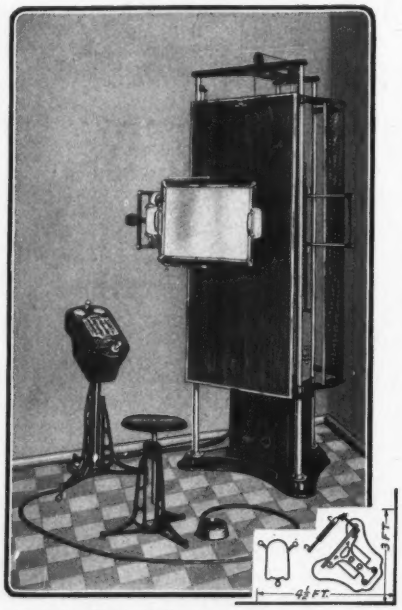

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What is Your Contact with Your Local Papers?

During the past few years great strides have been made in hospital administration and hospital activities and the public is being slowly educated to the great service being rendered by these institutions. This education is absolutely necessary if the hospitals are to get the co-operation they require, and it is being realized more acutely every day that if efficient service is to be given to suffering humanity on a scale commensurate with the demands made upon it, the co-operation of the great general public is absolutely essential.

It is believed that this can be accomplished through education and much has already been done along this line. But not nearly enough. The newspapers are, without doubt, the greatest agency for the advertising of the hospital; they reach the greatest number of the people and are read by people who either have not the time or the inclination to read anything else. Newspaper publicity, then, should be one of the first considerations in an educational campaign.

The newspapers have been, in most cases, ready and willing to co-operate, to print news of hospitals and to give space to hospital stories. But there is one feature which has been overlooked by so many and that is that the newspapers are a lay press and are largely incapable of editing and publishing hospital news as it should be edited and published.

It takes years of study to become a doctor, it takes years of study to become an efficient nurse; every department in a hospital is a highly specialized department and it is practically impossible for the ordinary layman to grasp the essentials of these departments in such a way as to get them across to the public. In this we feel that hospital administrators are much to blame. If subject matter of a highly scientific and technical nature is of sufficient importance that the public should be made aware of it, and it so often is, then it is up to some one in the hospital who is capable of undertaking the task to prepare articles suitable for publication and the understanding of the ordinary reader.

Then again there is so much hospital news which does not get to the public at all, news which does not, perhaps, seem of much importance to those hospital administrators who are coming in contact with similar experiences so often as to permit them to lose their significance. But this is news to the public. Little human interest stories, stories of the nurses who remember their patients' birthdays and of the patients who remember their nurses' birthdays; stories of the chronic patients who have been so restored that they can resume their daily activities; stories even of statistics which, if repeated often enough, will make the public sit up and take notice. We admit these stories appear at special times when there is a drive on for funds, for instance, but it is the constant repetition of these things which will make the hospital a known quantity to those who have had no experience with hospitalization.

Here again hospital administrators are negligent. If they accept the co-operation of the press, they must in return co-operate and offer such information to the reporter as will enable him to print the story. In these little stories of human interest the newspaper reporter is quite able to make the most out of it, but he must have the facts to work on. If the members of our hospital administrations would keep this in mind, there are many happenings which could be made use of in our campaign to educate the public regarding the service our hospitals give, the cost of the service, the improvement in the service and the very important human element in this most human of all services.

A Civic Hospital Association Offers Solution to Problem of Middle Class Patient

Perhaps one of the most absorbing questions confronting hospital administrators to-day is the problem of hospitalization for patients of moderate means. It is a subject which has been discussed from every conceivable angle and one which is looming larger as days go by without, apparently, a satisfactory solution.

It is freely admitted by those who are interested in this field of endeavour that no agency for service has developed more than hospitals during the past twenty years. The public is at last being educated to the fact that the hospital is the only natural place where one can secure efficient and proper care in case of sickness whether that sickness be of a severe and dangerous type or not.

In the modern hospital there are departments fitted up with equipment to deal with any type of case which has so far been encountered; facilities are there available such as modern science and research has been able to provide. This is impossible in the home, and the public is beginning to realize the advantages of hospitalization and to act upon this realization.

So far, so good. "But," complains the man of moderate means, "what about me? I cannot afford to pay the regular hospital charges and I am not entitled to, nor desire, the service available to indigents. You have taught me to realize the desirability and necessity of a service of which I cannot avail myself."

We admit it is true but what is to be done? We were most interested in reading, therefore, in "Hospital Management" of a plan which is to be tried out in Chicago and which, if it can be successfully put into practice, will solve in some manner the problem of giving hospitalization to the person of moderate means at a price which he can afford to pay.

No Element of Charity

This solution is planned by the Civic Hospital Association of Chicago, Ill., and while the manner of solving the problem is unique it seems logical. It is a plan which can be used in other communities and Mrs. Ethel Kincaid Greenbaum, president of the Association, has outlined in the February issue of "Hospital Management" the aims, objectives, methods and difficulties encountered.

The most striking features of the plan are these:

First, there is absolutely no element of charity involved. Above all else the person of moderate means must be enabled to maintain his self-respect and rightly feel that he is paying his own way. Any method by which patients of moderate means are rendered hospital service at comparatively low cost because of some outside factor, such as an endowment, either directly or indirectly, is actually a work of charity; and such a plan can have but little permanent value.

Second, the responsibility for the solution of this problem should be placed squarely upon the public itself, as represented in this instance by our association. In practically all the discussions of this problem, particularly in the lay press, it has been assumed that the task of correcting the situation should be performed by the hospitals, and that they were responsible for the existing conditions. On this point alone any plan such as that being sponsored by the Civic Hospital Association of Chicago should receive sympathetic support from the hospital field, because the plan attempts to shift the entire problem from the hospitals' shoulders and to make it a direct transaction between the public and the association. Nothing is asked from any of the hospitals which affiliate except their co-operation and moral support.

Outline of Plan

The association pays for the accommodations used by its members at the usual hospital rates, and in no case asks or desires that any hospital care for one of its members at less than cost.

The membership is to be composed of the respectable self-supporting class who constitute the backbone of any large community or city, while the services and privileges of the hospital are to be acquired on terms that are equitable and in accord with the natural pride and dignity of that large and important element which will compose its membership.

The Civic Hospital Association of Chicago is a one hundred per cent. co-operative hospital service provision plan. It is an adaptation of the plan so widely used in Cuba, of "clubs" which provide hospital treatment for their members.

In essence, the Civil Hospital Association of Chicago has taken upon itself the task of selling annual memberships at a nominal cost ($18 for Class A, and $14 for Class B, per year) in return for which the association agrees to furnish hospital service for a period not to exceed fourteen days during any one year. The fees from memberships will be found ample to care for all hospital treatment of members, and the association will be entirely self-sustaining. Since the association is not organized for profit, should any surplus funds accumulate, these will be used to reduce dues, furnish more service, or in such manner as the directors decide.

There are two classes of memberships. Class A members will pay $18 per year ($17 per year if paid in advance.) Dues payable either monthly, quarterly, semi-annually, or annually in advance as desired by members. In return for this fee the member is, "upon advice of a doctor of medicine

Courtesy of Milne Studios

MR. J. H. W. BOWER
Superintendent of Sick Children's Hospital, Toronto

holding his M.D. degree from an accepted medical school and licensed by the state to practice as physician and/or surgeon—and approved by the association," entitled to hospital service for a period not to exceed fourteen days per annum for such illnesses as are acceptable hospital cases. Service is to consist of a private room, board, general nursing service, ordinary medicines, use of operating or delivery room and routine laboratory examinations.

Class B is to pay $14 per year ($13 if paid in advance). Dues payable either monthly, quarterly, semi-annually or annually in advance as desired by member. Member is entitled to exactly the same service except that it is to be rendered in a semi-private room.

In no instance is the membership fee to include physicians' fees or fees of special nurses.

These dues have been carefully determined upon a basis which makes the association self-supporting. For purposes of determining the dues we have arbitrarily accepted the sickness quotient of one in eight, which statistics show is a conservative estimate.

At the outset it is the intention to admit to membership office employees of large corporations. It has been tentatively determined that it is desirable to have three thousand members before starting service under the plan.

The conditions of membership in the association are as follows:

1. Any person between the ages of 16 and 65 may become a member, subject to conforming with the rules and regulations, and to approval by the membership committee.

2. No medical examination is required.

3. It is not required that the fourteen days be taken consecutively, but can be taken throughout the year as needed.

4. Hospital care goes into effect: in cases of accidents, from date of initial payment of dues; in cases of sickness, fifteen days from date of initial payment of dues. Members upon entering the hospital will be required to pay in advance the current yearly dues (or unpaid portion thereof.)

5. If hospital accommodations cannot be provided because of epidemic, paid-up dues will be refunded.

6. In maternity cases hospital service goes into effect three hundred days after initial payment of dues.

7. Persons afflicted with hernia, tuberculosis, alcoholism, drug habits, chronic appendicitis, mental or venereal diseases are not eligible.

8. Membership card must have identification picture and signature of member thereon.

9. Membership card must be presented to the hospital when application for admission is made, and member must notify the association immediately upon intention of entering the hospital.

10. If membership is obtained by fraudulent answers, membership is forfeited.

While the principles of organization and operation of the association have been definitely settled and agreed upon, there are still a number of details which must be worked out by the executive committee and the advisory hospital board composed of superintendents of the co-operating hospitals. For example, some hospital rates include routine laboratory examinations and medicines while others do not, so that at least a partial equalization of rates must be achieved.

A number of other problems of varying degrees of importance must still be definitely worked out before actual operation commences, but these are all matters of detail and do not affect the basic principle of the plan in any way.

As this article is written, most of the preliminary work of organization has been accomplished, and the actual operation of the plan will commence within a very few weeks.

MIDDLETON, N.S.—Extensions to the Soldiers' Memorial Hospital, at Middleton, have been completed. The old dining room and pantry have been remodelled for use as X-ray department, and the operating room has been enlarged and improved. Adjoining this is a room for the doctors, with a modern lavatory and lockers. The new upstairs portion contains a maternity ward, and downstairs the kitchen has been enlarged and a new living room, dining room and pantry constructed. The entire building has been rewired and all fixtures and appointments made as safe as the most modern methods can make them. •

Sixty-Nine Years of Progress in History of London Hospital

Like so many other institutions of its kind Victoria Hospital traces its origin to a most humble beginning. In 1860 London's hospital needs were cared for in a two-storey frame building situated at what is now the corner of York and Thames Streets.

1870 saw a marked change for the better in hospital accommodation, when the Military Hospital on Kent Street was presented by the military authorities to the city of London for use as a General Hospital. Due to a part of this building being destroyed by fire in 1874, a new General Hospital was erected in that year upon the present site. This building provided accommodation for sixty patients. 1883 marked the establishment of a Training School for Nurses (the third in Canada) which offered a two-year course and opened with a class of three. Previous to this date nursing care (such as it was) had been provided by untrained male help. In 1887 management was vested by an Act of Incorporation in a Board of Trustees.

To meet the demands of a steadily increasing population a complete hospital building was erected to the east of the original plant in the year 1898. A few years later an Isolation Unit was added for the care of infectious cases, and in 1909 an Out-Patient Department was opened. One year later a pavilion was erected for the treatment of tubercular patients.

The next few years saw many minor improvements to the hospital building and administration.

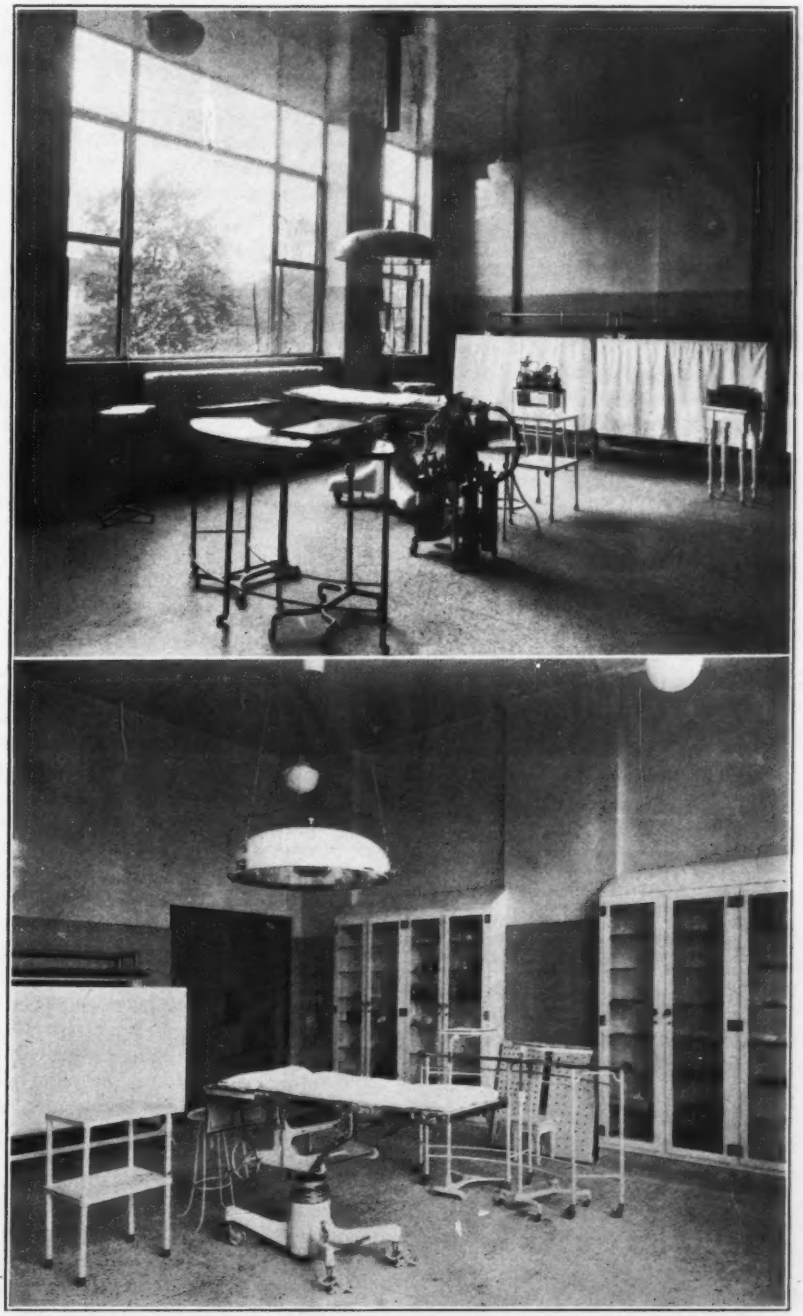
1923 marked the opening of the War Memorial Children's Hospital, an eighty bed unit of Victoria Hospital, which was erected through the combined efforts of the various organizations of London and Western Ontario, under the direction of the International Order of the Daughters of the Empire.

The demand for nurses having increased steadily new quarters were required; and in 1926 a Nurses' Residence, accommodating 124, was erected directly opposite the hospital building. At this time a subway was also built connecting all hospital units. Through the generosity of Colonel W. M. Gartshore, chairman of the Board of Trustees, a complete modern operating suite was provided in 1927; and in 1928, also through the generosity of Colonel Gartshore, an addition to the Nurses' Residence was erected.

This brings us to 1929, which year finds the hospital requirements of the city of London being met by a hospital whose units cover an area of a city block, with a bed capacity of 400, an appointed medical staff of 50, a Training School for Nurses

Continued on Page 43

A View of Victoria Hospital Buildings, London, Ont.



Operating Rooms in the Victoria Hospital, London, Ont.

The Various Activities Occupying the Field of Public Health Work

By DR. J. W. BELL
Deputy Minister of Public Health, Province of Ontario

PART I

Regarding the connection between public health and hospital management and organization, we think of hospitals as places where people go to get well. That gives us some connection with health to start with.

When we study the internal organization of a hospital we find that there we have two main groups: first, the group called the patients, and, second, the group called the hospital staff. The second group is subdivided into the nursing group and the service group. The hospital medical staff, with the exception of the interne, is not a part of the internal organization. It is external.

We might develop the idea of health protection as applied to the patient group in the hospital. Sick persons go to hospital to regain their health and to those of you who are directly associated with hospital management, let me say that a very important function that must be discharged with respect to these patients is to protect them in such a way that while in hospital they will not contract further illness or develop other infection than that for which they originally entered the institution.

Efficient Staffs Necessary

In order that the patients may be protected in this respect, your nursing staff and your service staff must be fully informed as to their responsibility in the matter of keeping well so that, first, they may be able to properly discharge their duties in the institution, and, second, they will not endanger the patients entrusted to their care by subjecting them to the risk of further infection. In making this remark I am thinking particularly of the common cold and other respiratory infections which are so readily transferred from one to another. You cannot get efficient service from people who are not one hundred per cent. well. You cannot house people under conditions that are not conducive to health and expect them to do satisfactory work. For example, if in your hospital staff bed-rooms you use double beds you must expect to get a great deal more infection than you otherwise would have.

It is important in hospital management to remember three things: first, the restoration to health of those who come in as patients; second, the protection of what health the patients have during that process; and third, the instilling in the minds of the staff of the hospital the principles governing the establishment and promotion of good health.

After these few brief remarks on health and hospitalization, which I take liberty of interjecting, permit me now, in a very sketchy way, to discuss the subject which has been assigned to me on this programme, namely, "Public Health Work."

I have been very materially helped in my consideration of this subject by a man whom I met in the smoking compartment of a pullman car on a recent railway journey. We were alone in the compartment, and I found him very soon to be not a B.A. or an M.D., or a man who had any other university or college qualification, but one of those practical, hard-boiled graduates from the school of experience—a keen, alert man—and it was not long before he knew all about me and in what line of work I was engaged. He started in by asking me, "What is this public health work you are doing? I don't understand what you mean by public health. I know that they put placards on houses where there are contagious diseases but public health must mean something more than that."

Covers Wide Field

In answer I commenced to give him a big definition of public health, but he stopped me, saying "You are over my head. Tell me in plain words what you mean by public health." I then considered it best to give him concrete examples illustrating the various activities occupying the field of public health.

One of the primary and most important factors in the maintenance of health is nutrition. The newspapers of the day and all of the popular magazines carry articles dealing with diet in its relation to health. There are people who are eating to get fat. There are others who refrain from eating in order to get thin. There are cranks and faddists and extremists in both directions. There are people who are making themselves ill trying to acquire fashionable figures. There are people shortening their lives by over-indulgence in food and then we have the sane group of people who are taking food according to their requirements. Those who are doing hard manual labour are taking a larger quantity of food and are selecting the food suited to their needs. Those who are engaged in sedentary occupations are cutting down on their intake of nourishment. An individual may make a very definite exhibition of his sanity and level-headedness in the matter of food intake.

We next discussed the public health aspects of the milk supply and I proceeded to outline for him in what way the health department should properly function in the control and production of milk. We have been accustomed to regard the butter fat test as the principal test of the quality of milk, but we no longer regard this test as of primary or fundamental importance. What we now feel is that the

From an address read before the Fifth Annual Convention of the Ontario Hospital Association held in Toronto, October 18, 1928.

safety of milk is the most important factor of all in connection with the milk supply. Too often we see a bottle of milk with two lines—a cream line at the top and a dirt line in the bottom. Such a milk, no matter how deep the cream line, cannot be considered safe or satisfactory milk for human consumption. We must stress the safety in milk as the all-important factor. Outlining the procedure in the production of milk we first must consider the cows. We must determine that they are free from disease. Next, we must see that we have satisfactory and sanitary conditions in the stables, in the milkhouse and in the utensils used in the operation of collecting milk.

Further, we must be sure that those coming in contact with the milk as milk handlers are free from disease. We stressed the point that milk handlers might introduce into the milk disease-producing organisms which might, and often did, initiate a serious epidemic, as had happened in some of the typhoid epidemics of recent years. We then discussed the proper temperature at which milk should be kept, the value of rapid chilling after milking, and the subject of pasteurization.

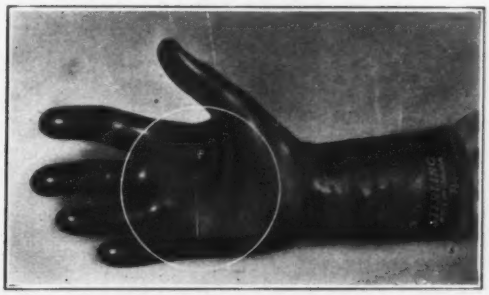
He said that he was opposed to pasteurization and that he did not believe in it. He felt that by pasteurizing the milk it was changed in certain ways which detracted considerably from its food value. I explained to him that if every sanitary precaution were taken in the production of milk that probably a milk might be produced which would be from sixty to sixty-five per cent. safe; that it was absolutely humanly impossible to produce a one hundred per cent. safe milk if it were to be used in the raw state, and that the remaining thirty-five to forty per cent. in the attainment of the one hundred per cent. safety factor in milk could only be reached by efficient pasteurization. It is humanly impossible, without pasteurization, to produce a milk free from organisms of disease. Consequently, in order to obtain a perfectly safe milk and one free from the liability to produce disease, it is necessary to have the virulent possibilities of these organisms destroyed. Pasteurization is the only process that will fill the bill.

We then left the discussion of milk and took up the question of water supply. Domestic water supplies are often, in the case of large municipalities, bodies of water such as a lake or river, and in the case of the smaller community, individual wells or deep wells. Up until a few years ago we had no treatment of water. Now we have filtration plants and we also use chlorination to ensure the safety of doubtful supplies. The results of this water treatment have fully justified the efforts and expenditure made, for, while twenty years ago the death rate from typhoid fever alone, largely of water supply origin, was approximately fifty per cent. per 100,000 population; it is now reduced to approximately two and a half per cent. per 100,000 population. Again we feel safe in saying that the results have justified the efforts and expenditure.

(EDITOR'S NOTE: Part II of this paper will be published in the April issue of the CANADIAN HOSPITAL.

Sterling

SURGEONS' GLOVES



"Second Skin" Aptly Applies To These Gloves

Note from the untouched photographic reproduction the smooth, even fit at the palm.

Free blood circulation and complete freedom of muscles are the result.

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More than three times as powerful a germicide as pure carbolic acid. Used by leading hospitals because it is highly efficient and economical.

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TORONTO - MONTREAL

Metropolitan Hospital, Walkerville, Serves Seven Border Municipalities

By HAROLD J. SMITH,
of Stevens & Lee, Architects, Toronto.

The $500,000.00 Metropolitan Hospital, although located in Walkerville, was built under the auspices of the Essex Border Utilities Commission, which is a body composed of representatives from each of the seven municipalities adjoining each other along the Detroit River front. The institution was designed jointly by Pennington & Boyde, architects, Windsor, Ont., and Stevens & Lee, architects, Toronto, Ont., acting as consultants.

This new institution is the result of a movement started in 1923 by the interested authorities and is controlled by the Commission mentioned above. The funds were provided by the interested municipalities and by public subscription. The property is a level tract of land occupying approximately eight and one-half acres, and is located on the outskirts of Walkerville near the line between it and Windsor. It is also within 125 yards of the new Tecumseh Highway which passes through all of the interested municipalities. The locality, while of a residential nature, is reasonably close to many of the large factories so that the hospital is of great service in cases requiring emergency treatment of accidents.

In laying out the scheme from the beginning the future growth of the institution has been kept in mind. The present accommodation is for 81 beds in the General Hospital and 21 beds in the Isolation Building, while the main service units have been planned to accommodate from 350 to 400 patients plus the nursing staff and servants. The three buildings at present erected are all connected with passageways partly above ground. These contain all the pipes from the power house and provide a convenient means of communication.

Main Building

This building faces the northwest and has a one-storey wing to the south which contains on the lower floor the receiving rooms, main kitchen, cold storage rooms, refrigeration machinery, etc.

The ground floor of the main wing provides

The Metropolitan Hospital, Walkerville, Ont.

Nursery in Metropolitan Hospital, Walkerville, Ont.

accommodation for the diet kitchen, staff dining and serving rooms, X-ray department, pharmacy, laboratory, psychopathic ward, emergency surgery unit and ambulance admitting department.

First Floor.—In the centre of this floor are located the main entrance, waiting rooms and administration offices. It provides accommodation for twenty-six public patients with a large solarium at each end of the wing. The nurses' station is located in the centre of the building and has excellent supervision over the entire corridor, the entrances and elevator. There is also provided on this floor a doctors' waiting room, internes' sleeping quarters and a record room in addition to the necessary ward dependencies for the care and comfort of the patients.

Second Floor.—This floor has eleven beds for semi-private patients and eighteen private rooms. There is one suite of two rooms having a mutual bath and private toilets. The solaria and ward dependencies are, of course, the same as on the lower floor.

Third Floor.—This floor is for maternity cases and children. For the former there are eight semi-private beds and ten private with two rooms having mutual bath and private toilets. At the northeast end of the wing is located the delivery suite providing ample accommodation for the care of the patients and also a large and sunny creche with necessary babies' bathroom adjoining.

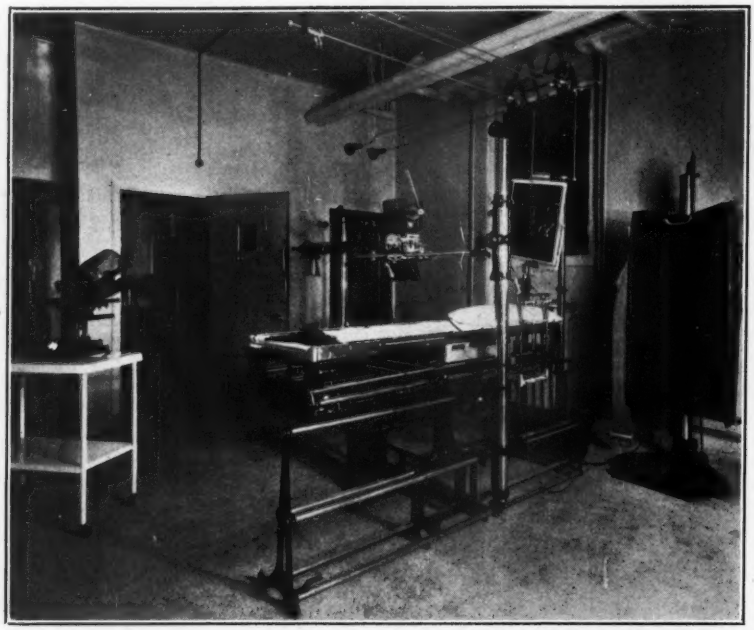
The children's accommodation is at the southeast end of the wing and contains eight beds together with a large and sunny playroom. There is a central solarium on this floor facing the south.

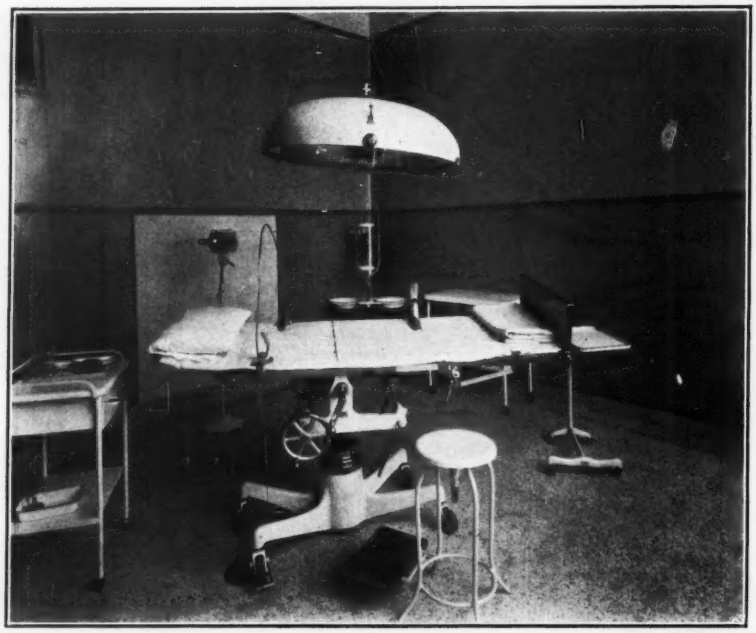
Fourth Floor.—This is the surgical floor and contains the operating suite and other essential rooms but with no accommodation for patients. There are four large operating rooms with a separate fracture room, with surgeons' scrub-up rooms and anaesthetic rooms adjoining. Sterilizers for instruments and utensils are located in a separate room close to the majority of the operating rooms. The dressing sterilizers are built in and are controlled entirely from the nurses' work room. In addition to the above rooms there is an ample supply room, orderlies' room, surgeons' dressing room with shower and toilet, a laboratory and cystoscopic room.

Construction

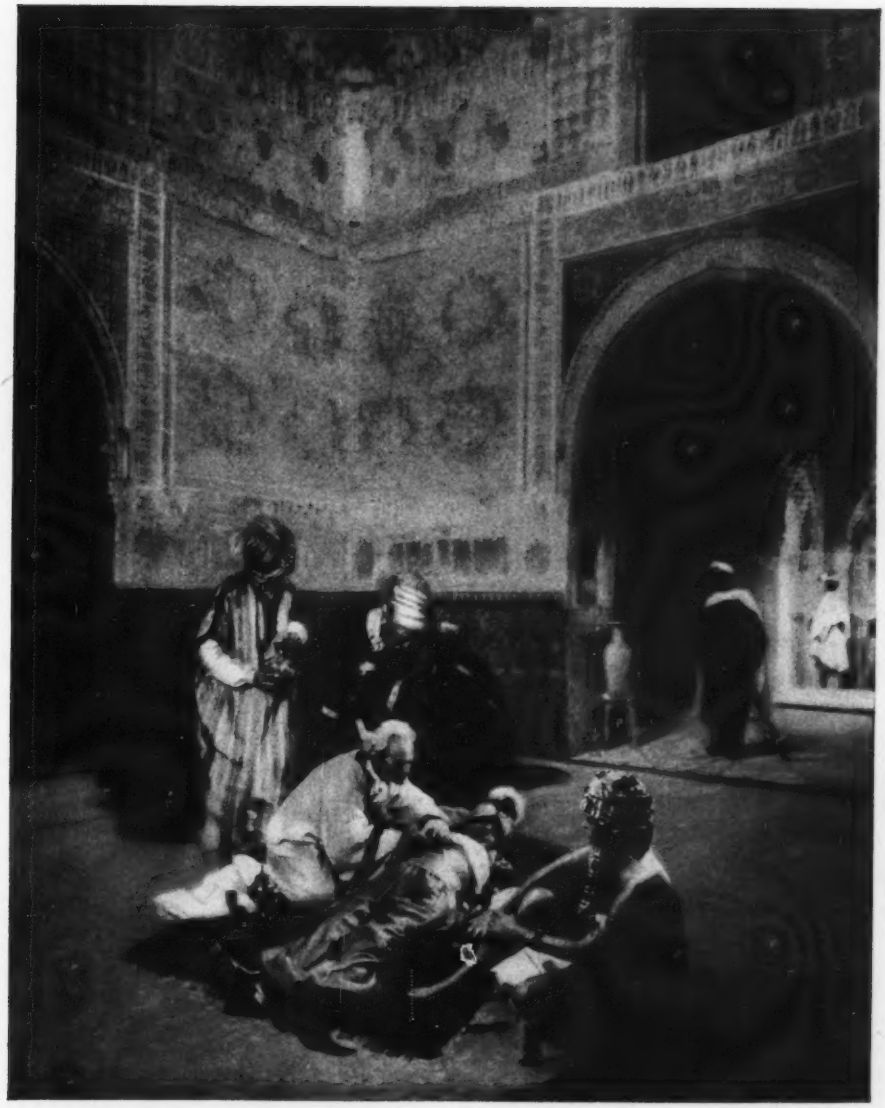
The building is constructed with brick and hollow tile exterior walls with cut stone trim. The floors, beams and columns are of reinforced concrete. The elevators and stairs are entirely closed, with fireproof hatchways and fireproof doors at each floor. The general finish throughout is of the most modern and sanitary type for institutions of this kind. The floors in the patients' rooms and corridors are covered with linoleum while the service rooms such as sink rooms, utility rooms, bathrooms, toilets, operating

Continued on Page 27





The Metropolitan Hospital, Walkerville, Ont.
Above—X-Ray Room.
Below—Operating Room.



ALBUCASIS (*circa* 912 A. D.) was physician to El Hakim III, and the author of *Altasrif*, the leading textbook on surgery in the middle ages. He differentiates between small and large abdominal wounds, recommending that the edges of the former be approximated and pierced by a series of needles, apposition being maintained by winding thread about each needle in a figure of eight. Large wounds were closed with sutures.

D&G Sutures

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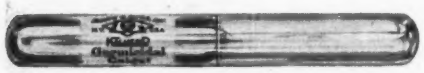
Kalmerid Catgut

GERMICIDAL. Exerts a bactericidal action in the suture tract. Supersedes the older unstable iodized sutures. Impregnated with the double iodine compound, potassium-mercuric-iodide.† Heat sterilized.



The boilable grade is unusually flexible for boilable catgut; the non-boilable grade is extremely flexible.

TWO VARIETIES

BOILABLE* NO.		NON-BOILABLE NO.
1205	PLAIN CATGUT	1405
1225	10-DAY CHROMIC	1425
1245	20-DAY CHROMIC	1445
1285	40-DAY CHROMIC	1485

Sizes: 000..00..0..1..2..3..4

Approximately 60 inches in each tube

Package of 12 tubes of a size.....$3.00

Less 20% on gross or more or $28.80, net, a gross

Claustro-Thermal Catgut

ASEPTIC. Sterilized by heat after the tubes are sealed. Boilable.* Unusually flexible for boilable catgut.

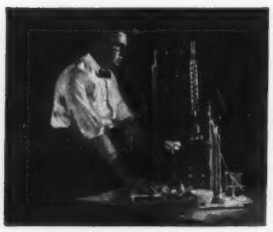
NO.	
105	PLAIN CATGUT
125	10-DAY CHROMIC CATGUT
145	20-DAY CHROMIC CATGUT
185	40-DAY CHROMIC CATGUT

Sizes: 000..00..0..1..2..3..4

Approximately 60 inches in each tube

Package of 12 tubes of a size.....$3.00

Less 20% on gross or more or $28.80, net, a gross

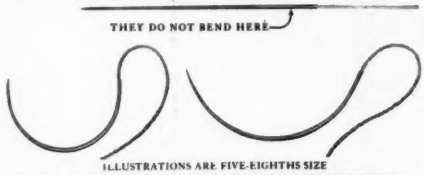


D&G Sutures are always found neutral under the most delicate titration tests. This is one of the reasons they uniformly behave well in the tissues.

Atraumatic Needles

FOR GASTRO-INTESTINAL suturing and for all membranes where minimized suture trauma is desirable. Integrally affixed to 20-day Kalmerid catgut. Boilable.*

Experimental evidence has proven 20-day chromic catgut the most suitable for gastro-intestinal suturing. It has been found that gastric wounds are fully healed within 12 days, and intestinal wounds at 16 days. At these periods the 20-day catgut (regardless of size) still retains, respectively, 60 per cent and 30 per cent of its initial strength.



ILLUSTRATIONS ARE FIVE-EIGHTHS SIZE

STRAIGHT NEEDLES ARE IN ROUND TUBES

CURVED NEEDLES ARE IN FLAT TUBES

NO.		INCHES IN TUBE	DOZEN
1341	STRAIGHT NEEDLE	28	$3.00
1342	TWO STRAIGHT NEEDLES	36	3.60
1343	⅜-CIRCLE NEEDLE	28	3.60
1345	½-CIRCLE NEEDLE	28	3.60

Less 20% discount on one gross or more

Sizes: 00..0..1

Packages of 12 tubes of one kind and size

Kangaroo Tendons

GERMICIDAL, being impregnated with potassium-mercuric-iodide.† Chromicized to resist absorption in fascia or in tendon for approximately thirty days. The non-boilable grade is extremely flexible.

NO.	
370	NON-BOILABLE GRADE
380	*BOILABLE GRADE

Sizes: 0..2..4..6..8..16..24

Each tube contains one tendon

Lengths vary from 12 to 20 inches

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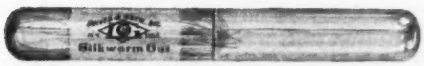
D&G Sutures are obtainable from responsible dealers everywhere; or direct, postpaid

Unabsorbable Sutures



NO.		INCHES IN TUBE	SIZES
350..	CELLULOID-LINEN	60	000, 00, 0
360..	HORSEHAIR	168	00
390..	WHITE SILKWORM GUT	84	00, 0, 1
400..	BLACK SILKWORM GUT	84	00, 0, 1
450..	WHITE TWISTED SILK	60	000 TO 3
460..	BLACK TWISTED SILK	60	000, 0, 2
480..	WHITE BRAIDED SILK	60	00, 0, 2, 4
490..	BLACK BRAIDED SILK	60	00, 1, 4

BOILABLE

Package of 12 tubes of a size.....$3.00
Less 20% on gross or more or $28.80, net, a gross

Short Sutures for Minor Surgery

NO.		INCHES IN TUBE	SIZES
802..	PLAIN KALMERID CATGUT	20	00, 0, 1, 2, 3
812..	10-DAY KALMERID "	20	00, 0, 1, 2, 3
822..	20-DAY KALMERID "	20	00, 0, 1, 2, 3
862..	HORSEHAIR	56	00
872..	WHITE SILKWORM GUT	28	0
882..	WHITE TWISTED SILK	20	000, 0, 2
892..	UMBILICAL TAPE	24	⅛-IN. WIDE

BOILABLE

Package of 12 tubes of a size.....$1.50
Less 20% on gross or more or $14.40, net, a gross

Emergency Sutures with Needles

UNIVERSAL NEEDLE FOR SKIN, MUSCLE, OR TENDON

NO.		INCHES IN TUBE	SIZES
904..	PLAIN KALMERID CATGUT	20	00, 0, 1, 2, 3
914..	10-DAY KALMERID "	20	00, 0, 1, 2, 3
924..	20-DAY KALMERID "	20	00, 0, 1, 2, 3
964..	HORSEHAIR	56	00
974..	WHITE SILKWORM GUT	28	0
984..	WHITE TWISTED SILK	20	000, 0, 2

BOILABLE

Package of 12 tubes of a size.....$2.40
Less 20% on gross or more or $23.04, net, a gross

The ash of D&G Sutures is assayed to make sure that no traces remain of uncombined chromium nor of other residues of the chromicizing process.

Obstetrical Sutures

FOR immediate repair of perineal lacerations. A 28-inch suture of 40-day Kalmerid germicidal catgut, size 3, threaded on a large full-curved needle. Boilable.*

No. 650. Package of 12 tubes.....$3.60
Less 20% on gross or more or $34.56, net, a gross

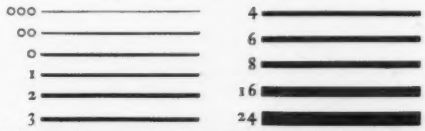
Circumcision Sutures

A 28-INCH suture of Kalmerid germicidal catgut, plain, size 00, threaded on a small full-curved needle. Boilable.*

No. 600. Package of 12 tubes.....$3.00
Less 20% on gross or more or $28.80, net, a gross

Universal Suture Sizes

All sutures are gauged by the standard catgut sizes as here shown



*These tubes not only may be boiled but even may be autoclaved up to 30 pounds pressure, any number of times, without impairment of the sutures.

†Potassium-mercuric-iodide is the ideal bactericide for the preparation of germicidal sutures. It has a phenol coefficient of at least 1100; it is not precipitated by serum or other proteins; it is chemically stable—unlike iodine it does not break down under light and heat; it interferes in no way with the absorption of the sutures, and in the proportions used is free from irritating action on tissues.

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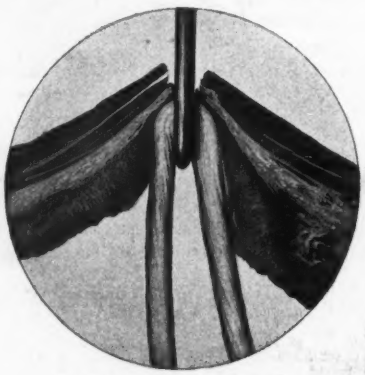
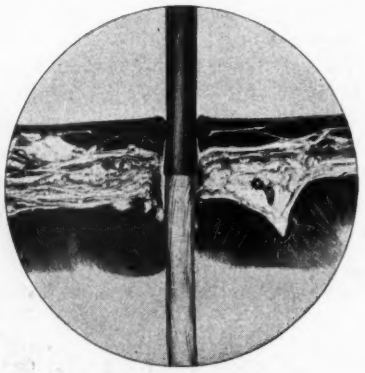
MINIMIZED SUTURE TRAUMA



ORDINARY NEEDLE

Photomicrograph of ordinary intestinal needle penetrating the stomach wall. Note excessive trauma produced by the doubled catgut.



ATRAUMATIC NEEDLE

Photomicrograph prepared under identical conditions, of the D&G Atraumatic Needle with suture attached. Note minimized trauma.

D&G ATRAUMATIC NEEDLE

Affixed to the Boilable Grade of 20-Day Kalmerid Germicidal Catgut

FOR GASTRO-INTESTINAL AND MEMBRANE SUTURING

IN PACKAGES OF TWELVE TUBES OF ONE KIND AND SIZE

PRODUCT NO.		DOZEN TUBES
1341.	A straight intestinal needle affixed to a 28-inch suture.....	$3.00
1342.	Two straight intestinal needles affixed to a 36-inch suture.....	3.60
1343.	A 3/8-circle intestinal needle affixed to a 28-inch suture.....	3.60
1345.	A half-circle intestinal needle affixed to a 28-inch suture.....	3.60

SIZES: 00..0..1

20 PER CENT DISCOUNT ON A GROSS OR MORE—POSTPAID

DAVIS & GECK INC. ▿ 211-221 DUFFIELD STREET ▿ BROOKLYN, N.Y., U.S.A.

Metropolitan Hospital, Walkerville, Serves Seven Border Municipalities

Continued from Page 21

which flashes a light over the door of the room and at the nurses' station in addition to sounding buzzers in the utility room and serving room. The plumbing and electric fixtures generally are of the modern hospital type. The operating rooms are equipped with imported French lights designed specially for this type of room. The sterilizing apparatus is of the most modern type. There is a water still located in the penthouse which delivers sterile distilled water at any desired temperature through reheaters in each of the operating rooms and also at outlets on each of the lower floors for ward purposes. All of the service rooms, kitchens, toilets, operating rooms, etc., are ventilated with ducts connected direct to the fans located in the penthouse. There are three fans, one for the operating and delivery suite, another for toilets, sink rooms, etc., and the third for kitchens and serveries.

This building is located on the northeast side of the property, is two storeys and basement in height and is connected direct with the main building and power house by tunnels.

Layout of Building

The first floor contains a small office and waiting room off the main entrance, a small operating room for minor work and accommodation for 21 patients, 12 of which are in three-bed wards for convalescent cases of similar character. The other beds are located in individual rooms for isolation purposes. Each room has a basin with hot and cold water, and a private toilet adjoining it which has a special fixture over it so that the bed pans for the patients may be taken care of without leaving the room. The three-bed wards have similar accommodation off each of them with the addition of a bath. There is also provided the necessary utility, linen and serving rooms and nurses' station for the proper supervision and care of the patients.

The second floor covers only about one-quarter of the area of the building and accommodates for the present the nurses necessary for this building. The building is constructed so that it can, in the future, take four additional storeys, the present second floor being designed so that it can be readily converted for the use of the patients.

The ground floor provides accommodation for patients' clothes and nurses' dining room, mattress disinfection and storage rooms.

The general construction and finish of the building is the same as for the main building.

At the rear of the property has been located the power house, which has been built large enough so that when the future wings and buildings are added all that will be necessary to install is additional equipment.

A laundry has not been built at the present time, but has been considered as a part of the scheme and can readily be erected whenever the authorities so desire.

MOP?

SLOP!

THERE'S danger ahead for the institution which clings to the old "slop and mop" way of floor cleaning. Danger not only to its reputation and the welfare of its patients, but to the economy of its budget as well. Modern hospitals heed the signs and recognize that the same degree of cleanliness must apply to their floors as is the rule throughout the rest of their immaculate institution.

In the face of such a problem, leading hospitals all over the country are relying upon **FINNELL SYSTEM** to keep their floors scrupulously clean. In the operating room, in the wards, in the corridors—throughout the whole institution, the **FINNELL** Electric Floor machine works noiselessly, getting the dirt out of the cracks and crevices, making the floors beautifully clean. Operates flush with the baseboard too, gets into corners, and under permanent fixtures and furnishings. The **FINNELL** Electric Floor machine waxes and polishes linoleum or wood floors just as easily and quickly as it scrubs.

FINNELL SYSTEM will prove a real economy in your hospital, in floor surfaces preserved as well as in time, labour, and money saved. There is a right size **FINNELL** among the eight different models for every hospital, large or small. Our engineers will be glad to advise you as to the model best suited to your requirements. It costs you nothing to investigate.

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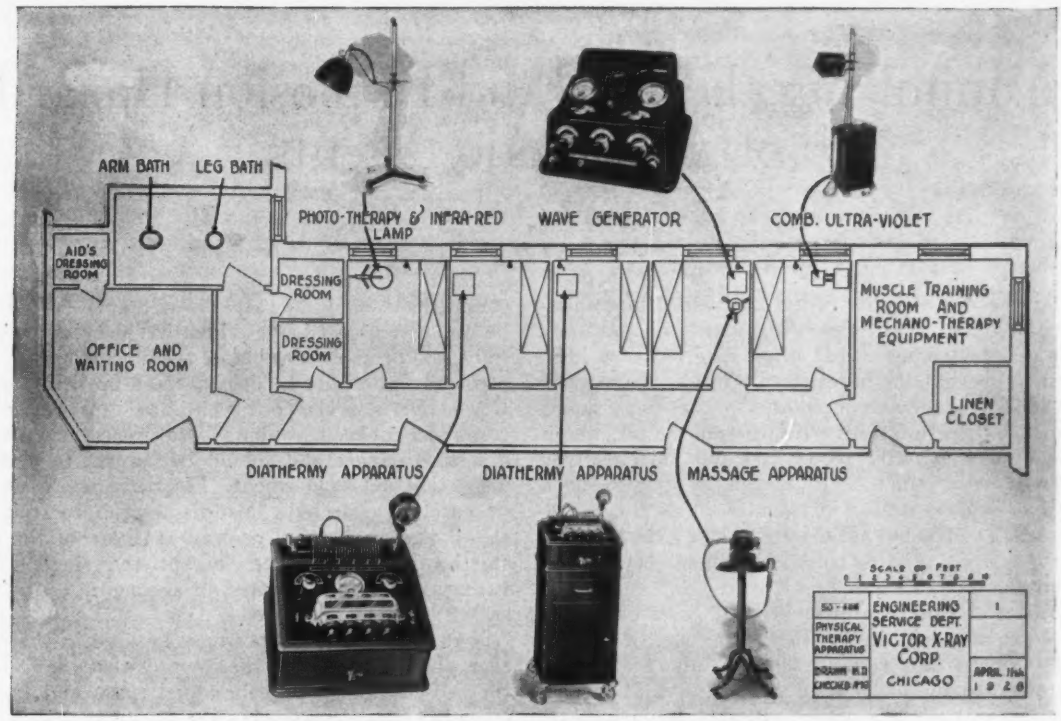
FINNELL
ELECTRIC FLOOR MACHINE

A Private Room in the Metropolitan Hospital, Walkerville, Ont.

A Ward in Metropolitan Hospital, Walkerville, Ont.



This is a typical floor plan submitted as a suggested layout for the Physical Therapy Department of a medium-size hospital, and supplements a list of specifications and other detailed information and suggestions helpful to the hospital superintendent, building committee and architect. Layouts for an X-ray Department are handled in a similar manner.

Victor Hospital Service Bureau

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Minimizing the Fire and Explosion Hazard of Anesthetic Agents

By C. H. WARDELL, Jr., Ph.B.

Chief Chemist, The Ohio Chemical and Mfg. Co., Cleveland

In the use of ether, ethyl chloride, chloroform-ether mixtures, or ethylene, for anesthesia purposes, it is generally known that great care must be exercised to prevent the unexpected ignition of the gases or vapors. It is common knowledge that these agents form explosive mixtures with oxygen or air, but it is not so frequently recognized that nitrous oxid behaves very much like oxygen in this respect. Nitrous oxid as well as oxygen, is an excellent supporter of combustion as demonstrated by the bursting into flame of a glowing splinter when subjected to an atmosphere of this gas.

All of the previously mentioned gases or vapors are commonly used in anesthesia and may be present singly or in any combination or any proportion. Nitrous oxid and oxygen are not explosive when used together without any other materials, but in almost all of the other possible combinations an explosive mixture may result. In general, in such possible mixtures ignition temperatures are low, explosive limits are wide, and the rate of the flame propagation is high.

The risk may be roughly divided into two classes: that which results from man-made appliances, and that which results from the forces of nature. In the first class fall the open flame, modern high-frequency equipment, and faulty electrical construction. In the latter class comes "static," much maligned and quite generally misunderstood. The two subjects will be dealt with separately.

The most common dangers result from open flames, faulty electrical construction or installations, and similar causes. Open flames and lighted cigarettes should not be permitted in the surgery even when it is not in use as there are numerous cases on record where fires have resulted from smoking in the vicinity of anesthesia apparatus when standing idle. Electric lights and switches should be of the vaporproof type; if this change is not immediately convenient, care should be taken that light bulbs are screwed tightly into their fixtures, and switches should not be turned during the course of an operation.

If at all possible, electric heaters should not be used with flammable anesthetics. Some of the existing types are so constructed that the elements are not vaporproof, the gases having free access to the glowing wires. (As this article is being written, advice is received that a manufacturer of anesthesia apparatus has developed an hermetically sealed electric heater for gas machines which has been accepted and passed by the fire underwriters.) If it is necessary to use a heater, it should be carefully inspected to make sure that it is of the proper type; loose connections should be carefully tightened. It should be connected (care being taken that the plug makes a tight, solid connection) before the machine is put into use, and should not be disconnected until the operation is over and the room ventilated. Worn electric cords and cables, as well as loose connections present a serious danger and should be subject to periodic inspection and replacement. Electrical devices should be carefully selected. Motors which are fully inclosed and vaporproof as well as those of the self-starting induction type (except the single phase variety which incorporates an automatic centrifugal switch) may be permitted.

X-rays and fluoroscopes may be used in the presence of flammable anesthetics provided they are of the self-contained, oil-submerged type, and further provided that the switches are oil-submerged or the remote-control type. The "radio" or high-frequency knife, the diathermy, and the hot or electric cautery, should NOT be used in the presence of a flammable anesthetic. In such apparatus, portions of the circuit through the patient necessarily have high alternating potentials with respect to ground, and sparks are very liable to occur from the patient to any other conducting body, such as the anesthesia machine or the operator, whether these are grounded or not.

Recently, a serious accident occurred in a large institution due to the use of a high-frequency machine in the vicinity of an atmosphere of ether vapor. The cause was primarily the discharge of an electric current from a point of high potential to a point of lower potential, producing a spark which ignited the ether vapor adjacent to the anesthetizing machine. It is therefore of the utmost importance that the anesthetizing machine and all flammable gases and liquids be removed from the room while cauteries or other equipment employing high-frequency current are being used. Consequently, when anesthetics are being administered in the presence of high-frequency equipment, nitrous oxid and oxygen, exclusive of any flammable synergist, is unquestionably the safest anesthetic.

Static electricity is a serious danger which is always present when flammable, volatile materials are being used. There are innumerable cases recorded where serious fires with consequent loss of life have resulted from the ignition of flammable gases, dust particles, volatile solvents, or dry-cleaning materials. Our hospitals have not escaped the toll, for there have been many disastrous fires resulting from the ignition of anesthetic agents by static sparks.

The difference between a static spark and ordinary electric power or lighting current is largely a

variation of duration, voltage and amperage. The static spark lasts only a fraction of a second and has a very high voltage. If we walk across the carpet of our home in dry winter weather we obtain a spark of considerable size when we bring the finger close to a grounded object such as a radiator, water pipe, or lighting fixture. In such cases the electric charge has become so large that it no longer remains "static," but jumps through the air in the form of a spark to some other body or to the ground. Under proper conditions, meaning a dry atmosphere and the walking across an insulated floor covering such as linoleum, carpet, or rubber, the spark would be sufficient to cause a fire in any establishment having exposure to flammable vapors. Persons with dry skins are more prone to such accumulations of static because they do not have a sufficient film of moisture to conduct the charge to ground.

Static charges are built up in many different ways; we are all familiar with them as manifested by the sparks and crackling sounds produced when we rub the back of our pet cat. In this connection, there is more or less humour in the case of the famous New Bedford tomcats. The city fathers, for the dispatch of stray cats, provided a tank filled with illuminating gas for suffocation. In several instances when particularly lively "toms" were cast into the tank, explosions occurred, being caused by discharges of static electricity.

It is not so generally known that such charges may be produced by the contact or separation of any two unlike materials whether solid, liquid, or gaseous, by friction, or by a gas in motion whether through a pipe, tubing, or in the air. It is a matter of controversy just how electro-static charges are produced by the flow of gases past solid surfaces, however, experimental evidence seems to confirm the belief that they are caused by the presence of minute particles of dust or droplets of liquids carried along by the stream of gas. Everyone will quickly realize that the proper conditions for the production of static may exist when gases or vapors pass through anesthesia machines or parts of such machines. The electricity is liable to be produced and stored ready to exhaust itself as an electric spark at the first opportunity. It is also caused by the expansion or contraction of the rubber breathing bags which form a part of some anesthesia machines. Some of these bags are incased in fiber, silk, or cotton mesh and the movement of the rubber bags against these meshes causes static charges to be formed. Such charges may exist on the inside of the bag as well as on the outside and it has been demonstrated that they remain in the rubber for a great length of time; in one instance, for more than three hours. When this condition exists someone may touch the machine, bringing about the contact which produces the electric spark, or changing the position of the machine may cause the bags

Continued on Next Page

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Minimizing the Fire and Explosion Hazard of Anesthetic Agents

Continued from Page 31

or hose to sway so as to produce contact with a metal part which may also produce a spark sufficient to ignite flammable gases or vapors should they be present.

The action of wind and upward air currents in breaking up large raindrops, as well as the friction of the wind, may gradually build up a charge of such enormous size and potential as to cause the tremendous spark which we know as lightning. The friction of wind on sand and dust particles has been known to cause high electric voltages. One experimenter states that static charges may be found on the rust particles escaping from compressed air tanks. Experiment has proved that hydrogen escaping from a tank which is rusted on the inside may be thus ignited. Puffs of steam and smoke from locomotives have caused high charges in overhead electric wires.

There is a remedy for static electricity. Industry has already solved its problem. Increased humidity supplemented in certain cases by proper grounding has reduced the static hazard to a negligible quantity.

It is common knowledge that it is most difficult to get a static spark in wet weather and easiest in winter when the air is dry. In damp weather all objects carry a film of moisture containing some impurities such as dissolved carbon dioxide. This film of moisture is a fairly good electrostatic conductor and serves to connect every part of every object to ground, thus preventing the accumulation of static charges. The degree of conductivity of this film depends upon the relative humidity of the air.

Relative humidity refers to the relation that exists between the actual amount of moisture present in the atmosphere and the amount that **could** exist under the same conditions of temperature and pressure without condensation.

The realtive humidity of operating rooms has been investigated on numerous occasions and has been found to be very low. This fact is due in a large measure, to the unusually high temperatures which are prevalent in the surgery. In winter time, when outside air is taken into a building and heated, a greatly lowered relative humidity results. For example, if the outside air were ten degrees Fahrenheit and the relative humidity were 90 per cent. at this temperature, the resulting humidity would be only 20 per cent. if the room were heated to 76 degrees Fahrenheit. Of twelve operating rooms investigated by Lake, the humidity of five was between 25 per cent. and 30 per cent., of six was between 30 per cent. and 34 per cent., and only one was 40 per cent. In order to raise the relative humidity of a room, it is necessary to add moisture in the form of steam, vapor, or spray and to prevent its subsequent condensation on cold surfaces such as windows and outside doors.

The percentage of relative humidity required to dissipate static charges is a question of debate; how-

ever, we may well be guided by the previous experience of other investigators in similar fields. One authority states that a relative humidity of 50 per cent. at 70 degrees Fahrenheit entirely disposed of static troubles in a rubber factory. Another company handling flammable materials also found that 50 per cent. relative humidity prevented explosions from static. A well-known dry cleaner, having experienced six explosions, and having exhausted all other means, raised the relative humidity to 40 per cent. and had no further trouble. It has been shown that a relative humidity of 45 per cent. gives a safe atmosphere, preventing static difficulties and consequent fires in the churn and spreader rooms of the rubber industry. It has been stated that every year almost 1,000 women are burned to death as a result of fires from dry-cleaning at home. Many of these fires and their consequent deaths were caused by static sparks generated by friction of the clothing during the process of scrubbing, the sparks igniting the gasoline or naphtha which was being used. If the rooms in which these accidents occurred had been properly humidified, the static charges could not have formed and the explosions would not have taken place. The housewife was not cognizant of the facts and even though she possessed the proper instrument for determining humidity, she would not have known how to proceed. Our hospitals, though, are more fortunate than the housewife, for they are operated under the supervision of a highly trained staff, and have readily available for use, humidity recording devices, as well as efficient and entirely automatic humidifiers.

Humidity a Big Factor

A national association for fire protection states that when the humidity of the air is more than 55 per cent. the moisture acts as a conductor, carrying off charges as they are formed, thus preventing static sparks. In commercial dry-cleaning plants, instruments known as hygrometers are used to measure the amount of moisture in the air, moisture being added artificially when the humidity falls below 60 per cent. These last statements agree well with our research when we found that, in operating-room conditions, 54 per cent. relative humidity would relieve the formation of undesirable electrical charges.

Having raised the relative humidity of the surgery to 55 per cent. at 70 degrees Fahrenheit, could we be sure that our protection against static electricity was complete? We could not, because inside of the gas cylinders and throughout the anesthesia apparatus, there is a dry gas, a gas wherein the relative humidity is reduced to the lowest limit. This dry gas, in passing through orifices and rubber tubing, is very prone to pick up static charges. Should these charges be given up to metallic devices, they would be distributed throughout the metal, and thence to ground, due to the conducting film of moisture on the outside surfaces resulting from the high humidity of the surgery. On the contrary, if these charges should be given up to parts which are well insulated, for instance dry rubber hose or rubber bags, they would not be dissipated but would accumulate. Should these charges accumulate to such an extent that they might dissipate themselves spontaneously in the form of a static spark, and should there be a flammable mixture within the anesthesia apparatus, an internal explosion within the apparatus itself would most certainly result.

What, then, is the answer? All equipment, such as cylinders and anesthesia apparatus should be electrically interconnected, preferably using metallic insert hose. The breathing bags and hose should be rinsed with water before use. It is wise to insert small wet sponges in the breathing bags, as they will give up water and insure proper humidification should the operation prove a lengthy one. If the room is properly humidified, the equipment may well be grounded. In dry atmospheres without humidification it is not impossible to have conditions where grounding would be undesirable; **humidification, therefore, is of the utmost importance.**

After use, it is excellent practice to thoroughly flush all flammable gases from the equipment with carbon dioxide. Hose and bags should be removed; bags should be deflated and flushed with water.

Flammable mixtures of anesthetic agents may be found in operating rooms due to leakage from valves, defective tubing, leaky bags, or poor joints. The gases which are exhaled by the patient are almost always explosive, provided a flammable anesthetic has been used. Recently our laboratory investigated about 50 cases using combinations of ether, ethylene, nitrous oxide, and oxygen and in almost every test the exhaled gases contained ether and oxygen, or ethylene and oxygen, well within the percentages of the flammability limits. These conditions existed not only during the period of the operation, but persisted for several minutes after the anesthetic had been discontinued.

Bearing on Health

It has been demonstrated that the presence of vapors in air results in a mixture of less dielectric strength than air itself. For example, it requires 16 per cent. less voltage to puncture a mixture of 10 per cent. naphtha and 90 per cent. air than it does to puncture air alone. Naturally, when a spark does occur, it will choose the path of least resistance and will take a course through the flammable mixture rather than through air.

The effect of increased humidity upon health will perhaps be questioned. Fifty-five per cent. relative humidity is **not** high, and it is the general consensus of opinion that such a percentage would prove beneficial rather than harmful. An editorial in the Journal of the American Medical Association commenting on Lake's findings of humidities varying from 25 per cent. to 40 per cent. says, "whether or not it is advantageous for patients to be subjected to dry heat may be debatable. The only suitable way to alter the situation is to provide artificial humidification." Dr. Winston in the same journal writes: "It seems to me a serious question whether such very dry air may not promote harmful evaporation from the body cavity." One of the newest hospitals in Baltimore has been equipped with humidification systems

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The Hospital Building Program

News in brief of Hospital Building, Extensions and new Equipment Installations, throughout Canada.

Editor's note: Contributions of items for publication in this department will be gladly received. Please address, The Canadian Hospital, 454 King Street West, Toronto.

HULL, QUE.—The work of the reconstruction of the four-storey centre section of the Hull Sacred Heart Hospital which was destroyed by fire will be commenced at the beginning of April, it has been stated. The cost of the proposed work will be approximately $125,000, and the building will be entirely fire resistant. The nurses' quarters, X-ray equipment and operating room fixtures, which were all destroyed in the fire, will be fully restored in the new building. As the wing which was built in 1926 is of fireproof construction the addition of a fireproof central portion will render the whole structure impervious to fire.

* * *

KAKABEKA FALLS, ONT.—It is understood that erection has been started at Kakabeka Falls of a two-ward hospital building by the newly organized rural district branch of the Canadian Red Cross Society. It will serve a rural population of about 2,000 people in the townships of Oliver, Conmee, O'Connor and Paipoonge and will serve, also, as an emergency station for accident cases, its service in this regard being an important one.

* * *

KINGSTON, ONT.—The Hotel Dieu Hospital is to be extended at an early date by the erection of a new wing on the Brock Street side of the institution. A five-storey building will be constructed and added to the present wing which was built some time ago on the north side. The addition is expected to cost several hundred thousand dollars.

* * *

KITCHENER, ONT.—We understand that construction is to start this spring on a new wing to the Freeport Sanatorium. Plans are being drawn, it

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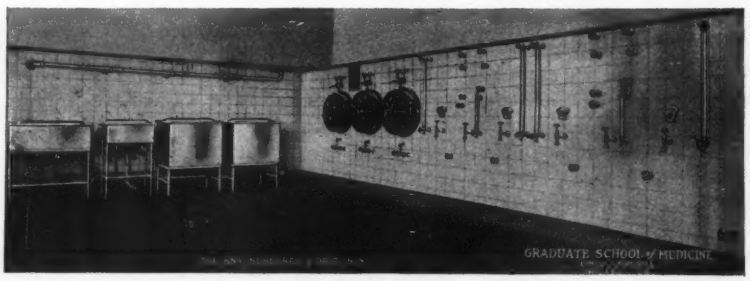

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is stated, for a three-storey structure which will increase the bed accommodation by 85. The cost is estimated at about $125,000 to $150,000, the building being 200 by 50 feet. The new units will be built in two sections, the first section only being erected this year. The lower floor will provide for medical quarters, kitchen and dining room accommodation, and the upper floors will be for the use of patients.

* * *

ST. CATHARINES, ONT.—The new addition to the St. Catharines General Hospital was formally opened in January. The entire top floor of the three-storey addition is to be devoted to the maternity department. Lawns and flower beds are being planned under the direction of Mr. H. Gray, parks superintendent, and these will greatly enhance the beauty of the institution.

* * *

ST. JOHN, N.B.—At a meeting recently of the St. John Municipal Council, it was unanimously decided to proceed with the erection of a new hospital at St. John, to cost approximately one million dollars.

* * *

ST. JOHN, N.B.—Plans for the construction of the new children's departmental wing at the St. John County Hospital have been accepted by the committee. The new building will be of modern, fireproof, scientifically heated construction and will be up-to-date in every detail. It will be built of brick with stone trimmings, two storeys in height, to accommodate 56 patients. There will be four wards of five beds each, one ward of four beds and two isolation rooms of two beds each.

The first floor will be directly connected with a terrace 16 feet wide. The second floor, set back two feet farther than the first floor, will have a five-foot terrace. A school room on the west end of the proposed wing, 16 feet by 30 feet, will be devoted to the educational growth of the children.

The estimated cost of the building is $85,000, including complete furnishings.

* * *

STRATFORD, ONT.—Perth County Council at a recent meeting granted $25,000 towards the erection of a new nurses' home for the Stratford General Hospital. Stratford ratepayers recently granted $50,000 as their share to the $75,000 home. Plans call for a two-storey and basement structure, with dimensions of about 34 feet by 132 feet, rug or mat-faced brick walls on concrete foundation, terrazzo on wood floorings, British Columbia fir trim, built-up composition roofing. Glass and steel screens will be provided at each of the entrances as well as British Columbia fir stairs with iron railings.

Included in the basement will be recreation room, kitchen, toilet room, laundry, trunk room, sewing room, class room and demonstration room. The first floor will contain vestibule, entrance hall and corridor, central bath and toilet room, also two bathrooms and three bedrooms adjoining, large

Continued on Page 41

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News of Hospitals and Staffs

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Editor's Note: Contributions of items for publication in this department will be gladly received. Please address, The Canadian Hospital, 454 King Street West, Toronto.

BRACEBRIDGE, ONT.—Miss Fanny Arnott, who has given such excellent service in her private hospital for some years, has been appointed superintendent of the new Memorial Hospital at Bracebridge, and with her as nurses will be Miss Osler and Miss Haney, of Toronto.

* * *

CARDSTON, ALTA.—Dr. J. K. Mulloy has been appointed to the position of house doctor in the new Indian Hospital at Cardston.

* * *

CORNWALL, ONT.—Miss Gertrude E. Gibson has recently been appointed Director of Nurse Education and Instructor at the Cornwall General Hospital. She is a graduate of Victoria Hospital, London, and post-graduate of University of Western Ontario, London, and has filled similar positions at Victoria Hospital, London, General Hospital, New Brighton, Penn., and Ottawa Civic Hospital, Ottawa.

* * *

EDMONTON, ALTA.—Colonel Dr. Frank Hamilton Mewburn, one of the most distinguished surgeons in Alberta, and Chief of Surgery at the University Hospital, died in that institution on January 29th in his seventy-first year. Dr. Mewburn was born in Drummondville, Ontario, and was a graduate of McGill University, 1881.

* * *

FREDERICTON, N.B.—A resolution favouring the formation of a provincial hospital association for New Brunswick has been unanimously passed at a recent meeting of the representatives of a majority of the province's largest hospitals.

* * *

GLACE BAY, N.S.—Miss Sadie MacLean, formerly of Glace Bay, has been appointed assistant superintendent of the Robert B. Brigham Hospital in Boston, where for the past four years she has been instructress of the nursing staff. She is a graduate of Salem Hospital, and was for a time supervisor of the Glace Bay General Hospital.

* * *

HALIFAX, N.S.—Miss Ethel MacKay Chisholm, night supervisor of the Victoria General Hospital, Halifax, has sailed for Formosa, where she will join the staff of the MacKay Memorial Hospital, Taihoku.

KINGSTON, ONT.—At the annual meeting of the Registered Nurses' Association of Ontario, district No. 7, Miss L. D. Acton, of Kingston, was elected president.

* * *

MOOSE JAW, SASK.—Miss Helen Robertson, who was recently on the staff of the Hospital for Sick Children, Toronto, and who for several years was connected with the staff of the Toronto General Hospital, has assumed the duties as dietitian at the Moose Jaw General Hospital.

* * *

MOOSE JAW, SASK.—Dr. Griffiths Binning has been appointed the medical director for the Moose Jaw Public Schools. He graduated from the University of Toronto in 1923, and later spent a year in the Hospital for Sick Children, Toronto.

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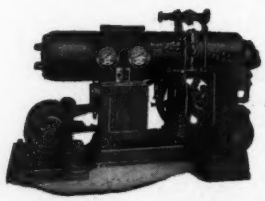

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MONTREAL, QUE.—Nurses from forty different countries will meet in Montreal next July. Between five and seven thousand are expected, according to Miss M. F. Hersey, superintendent of the Royal Victoria Hospital, Montreal, and general convener of the coming convention. So far about sixty nurses from Great Britain have announced their intention of being present; ten delegates have already registered from both Belgium and Germany; and six each from China and Japan. A very large attendance is expected from the United States.

Conveners of committees include two Toronto women, Miss Jean I. Gunn, superintendent of nurses of the Toronto General Hospital, programme convener, and Miss Jean Browne, the national director of the Junior Red Cross, finance convener.

Acceptances have been received from the following countries to date: Great Britain, United States, Australia, New Zealand, Hawaii, India, South Africa, Irish Free State, France, Belgium, Germany, Switzerland, Spain, Italy, Bulgaria, Austria, Poland, Greece, Turkey, Yugoslavia, Czechoslovakia, Latvia, Esthonia, Sweden, Norway, Holland, Denmark, Iceland, Cuba, Java, Philippine Islands, Brazil, Ecuador, Argentina, Chile, China, Japan, Korea and Syria.

* * *

STRATFORD, ONT.—Joseph C. Heidman has been elected chairman of the Stratford Board of Health for 1929.

* * *

TORONTO, ONT.—Mr. William Wilkinson, chief engineer of the Ontario Hospital at Mimico, has retired from public service. Mr. Wilkinson was given tribute for his loyalty and devotion to the institution on whose staff he remained for thirty-five years.

* * *

TORONTO, ONTARIO.—Dr. J. Y. Ferguson, of Toronto, has been appointed Chief of Staff of the Toronto East General Hospital.

* * *

TORONTO, ONT.—At the annual meeting of the Ontario division of the Ontario Red Cross Society, Mrs. H. P. Plumptre resigned from the presidency after ten years' loyal service. Professor George M. Wrong, of the University of Toronto, was elected to succeed her.

* * *

TORONTO, ONT.—Miss Annie J. Hartley, matron of Christie Street Hospital, Toronto, and a native of Brantford, Ont., has been appointed matron-in-chief for all the hospitals of the Department of Pensions and Health throughout Canada. Miss Hartley has a distinguished war record in England, France and Salonika. Her duties in her new position will extend to Shaughnessy Hospital, Vancouver, the Col. Belcher, Calgary, the Deer Lodge, Winnipeg, the Westminster, London, Ste. Anne de Bellevue, Montreal, the Kemptville, Halifax, and the Christie, Toronto. Over 120 nurses will be under her jurisdiction, of which some 50 are at Christie Hospital.

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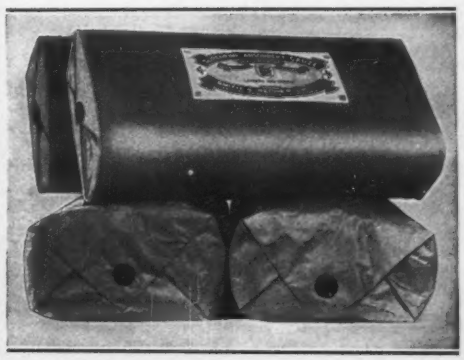

Minimizing the Fire and Explosion Hazard of Anesthetic Agents

Continued from Page 33

whereby the operating rooms are maintained at 60 per cent. relative humidity. Ellsworth Huntington in "World-Power and Evolution," and Dr. Edwin Grant Dexter in "Weather Influences," discuss in detail the effect of humidity upon health. It is safe to say that the reader of these two very interesting books cannot but be convinced that low humidity has a direct bearing upon crime and general deportment, as well as upon health itself.

To many, humidification may seem a serious problem, but there are organizations of worthy reputation who specialize in producing equipment which is guaranteed to condition the air properly. Many large public buildings, factories, theatres, stores, and office buildings use similar equipment. In addition to humidification some of these systems automatically maintain an even temperature and provide a complete air change in the room every four or five minutes.

In closing, the dangers of flammable anesthetics may be easily and thoroughly controlled. Man-made risks may be eliminated by thoughtful care and good judgment coupled with properly installed equipment subject to periodic inspection. The static hazard may likewise be reduced to a minimum by the use of rubber parts which have been made electrostatically conductive (by moisture and metallic devices) and by the use of a suitably designed and correctly installed humidification system.

Bibliography

In their study of this subject, **The Underwriters' Laboratories** mention the following points:

Open flames, lighted cigarettes, and any source of ignition should not be permitted in the operating room.

Electric lights and switches should be of the vapor-proof type.

Constant care should be taken to prevent the use of worn electric-light cords or cables, and to eliminate loose connections.

Only inclosed motors of approved types should be permitted in the room.

Humidity will, undoubtedly, reduce the fire hazard, but effectiveness will depend upon maintenance of humidity.

Rubber bags and other objects likely to accumulate electricity should be protected so far as possible by metallic coverings or inserts.

The author gratefully acknowledges the valuable suggestions and assistance given by Dr. M. G. Lloyd, Chief, Section of Safety Engineering, Bureau of Standards, Department of Commerce, Washington, D.C.; F. B. Silsbee, Physicist, Bureau of Standards, Department of Commerce, Washington, D.C.; F. W. Peek, Jr., General Electric Company, Pittsfield, Mass.; W. S. Paine, Aetna Life Insurance Company, Hartford, Conn.; Dr. N. A. Lange, Case School of Applied Science, Cleveland, Ohio; Dr. H. S. Booth, Morley Chemical Laboratory, Adelbert College, Western Reserve University, Cleveland, Ohio; Pierre E. Haynes, Consulting Chemical Engineer, East Aurora, New York; B. L. Benbow, Manager of the Cleveland Wire Division, General Electric Company, Cleveland, Ohio; E. R. Goldfield, Engineer, Engeln Electric Company, Cleveland, Ohio.

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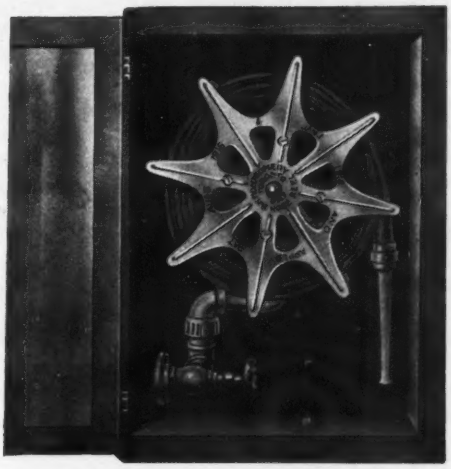
With the Manufacturers

Montgomery Hose Reels

Fire is a fearful foe, and fire protection is a vital need. Montgomery hose reels have been installed for many years in hospitals, schools, office buildings, government buildings, etc., and are claimed to be an extremely effective protection against fire. They embody exclusive patented features which make them superior to many others and are exceptionally easy to operate.

When danger arises there need be no delay to get help; the water may be turned on instantly. Springs under the drum slats of the reel allow the hose to expand to the full, so that if the fire is close at hand it may be drowned out with only a foot or two of the hose uncoiled.

If the fire is some distance away the hose may be pulled towards it. The reel will revolve, uncoiling the hose without checking the full, continuous rush



Montgomery Cabinet Reel

of water from the nozzle. It is claimed that with no other hose equipment is this possible.

Montgomery hose reels are strongly constructed of tested metal; they cannot get out of order and are so easy to operate as to be practically fool proof. Stock sizes carry one and a half inch, two inch or two and a half inch hose, in lengths of from fifty to three hundred feet. They can be made to special order in any size or finish required. Manufactured by H. B. Montgomery Hose Reel Co., Toronto.

Merck & Co.'s Optochin Base

In the optochin base treatment of pneumonia it is of the utmost importance to begin treatment at the earliest possible moment. Every hour of delay is to the disadvantage of the patient.

The theory upon which the treatment of pneumonia with optochin base is founded is as follows:

The maximum bactericidal power of the remedy must be maintained continuously for a definite period one to three days—employing the minimum quantity of the remedy necessary for the purpose. It was found in practice that, provided optochin base is used, and given in doses of four grains every five hours, day and night, and further, provided the treatment is begun within twenty-four hours, or at least not later than the second day after the onset of the desease, the results are all that could be wished. The fever abates rapidly, the course of the disease is shortened and rendered milder, and the patients experience a sensation of euphoria, while the appetite and general condition improve.

The base is used because, being practically insoluble in water, it is but gradually taken up into the blood circulation. With every dose of optochin base about five ounces of milk are given. The milk prevents the too rapid formation of the more soluble optochin hydrochloride by the action of the hydrochloric acid secreted and thus assists in maintaining a more uniform optimum concentration of the remedy in the blood. No other food or drink is given during the three days' treatment.

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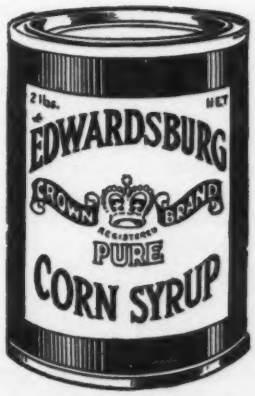

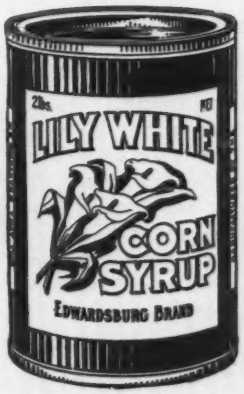

What is Real Laundry Economy?

By WILLIAM SHARPE,
Toronto Western Hospital.

What is laundry economy? Are you or any of your staff fairly sure that you actually know which laundry procedures are or are not economical? Or would it help you solve this important question of laundry economy to sum up in this short article the pros and cons of some of the problems about which many public and institutional laundry operators are undecided?

There is no question whatsoever as to the type of finished laundry work that is both economical and profitable. And too, the same factors apply to both public and institutional laundry work.

If you are a hospital executive you want your linens to last as long as possible—thus reducing the yearly linen replacement bill. The first requisite of economical laundering is that the washing process be accomplished with as little laundry wear as possible. It is in the wash room that good laundry work begins and the washing must be properly done.

Disregarding their order of importance, the following factors must also be found in a wash that is satisfactory and profitable—that washed clothes are clean, of good colour, not offensive in smell, and are soft to the touch and neither faded, greyed nor yellowed.

Big Variation in Products

It is doubtful if you could start an argument with anyone regarding the practicality of the above factors. Everyone is agreed that laundry work of this type is both economical and practical.

But the catch in the situation is this. Each and every laundry supply salesman who tries to sell you his goods either promises or implies that the mere purchase and use of his particular product is a guarantee of securing work of the type mentioned above. All this is promised or implied despite the fact that similar products may show wide differences in price.

With the many supplies and different kinds of equipment that are available for power laundering, it hardly stands to reason that all will produce the same quality of results, and that all systems or supplies will be uniformly economical.

Take the way supplies are used in the wash wheel for instance. It is but recently that the regular agitation to use soap and soda dry in the wheel has again subsided. As it is but human nature to use more of any given material than has been instructed, when washmen are permitted to use soap and soda dry in the wash wheel, extravagance results. Yet the advocates of this system have widely proclaimed the economy that is secured. When soap and soda are in liquid combination before being given to the washman, there is much more chance of their being economically used.

Another fallacy in this same regard is that while a poor soap is admittedly not to be compared with a good soap, there is a belief prevalent in some quarters that a poor soda if used properly will do just as good work as a quality soda. There are some laundrymen who claim that they can secure just as good work with caustic soda as they can with a good quality modified soda. These same laundrymen point out that the initial price of soda ash may be one half that of a good modified soda. They maintain that using such products gives them profit. I say not.

Careful Supervision Necessary

If washing clothes were a purely mechanical process with no human factor to consider, the above reasoning might possibly hold. But, as long as washmen are subject to human failings, the use of corrosive materials such as caustic soda, soda ash and chloride of lime as laundry sodas will not be economical. An excess of these materials in a single load per week will do enough damage to many times offset the supposed economy of the so-called cheap washing materials.

It may be possible under laboratory conditions to do good washing with caustic materials. But, how many washmen will take the care and attention with a load of clothes that the trained laboratory technician does?

However, merely purchasing a so-called modified soda does not guarantee laundry work of the quality described in the beginning of our discussion. If a soda does not wash clothes clean, if it is not free rinsing, and if it yellows, greys, or injures the clothes, the particular soda is not economical at any price to any hospital.

Another fallacy in regard to buying laundry sodas is the chemical analysis theory. You are offered two laundry sodas which are claimed to analyze exactly the same chemically. Perhaps you have been using a quality soda at four or four and one-half cents a pound. Along comes a salesman who claims that he can sell you a soda that analyzes exactly the same chemically for two and one-half cents a pound. It is but natural, therefore, that you should at least pay some attention to his arguments.

Did it ever occur to you that a good apple pie and a very poor apple pie analyze just about the same chemically? Chemical analysis is an indication of what a material is composed, but it is of very little value in telling what a laundry soda will actually do in the wash wheel. And too, a part of the action of a successful laundry soda is physical and is not taken into consideration in chemical analysis.

With all due respect to laundry chemists and laundry theorists, the only test of what any laundry soda will actually do in the laundry wheel is its use. And if a laundry soda will not produce the type of work that holds your linen replacement bill at a

minimum and that pleases both you and your superintendent, then the particular laundry soda and soap is not economical.

Summing up the entire matter, no laundry supply, no laundry soda or soap and no laundry procedure is economical unless clothes are week after week washed clean, are soft to the touch, of good colour, pleasant to the smell, and do not show undue signs of laundry wear.

When washing of this type is being accomplished at a reasonable cost, laundry work is being done economically. But when your finished laundry is not of the type described above, you are not securing economical washing no matter how seemingly low your costs may be. If you own your linens a ten per cent. decrease in your yearly linen replacement bill will more than take care of the few extra dollars necessary to procure quality laundry supplies, competent employees and so secure quality laundry work.

Securing laundry economy is not always a matter of paying the smallest wages or buying the lowest-priced supplies, or of doing certain operations in the shortest possible time. In this connection it must be noted that eight out of every ten washmen load their washers too full and do not take time to properly rinse the linens after washing. There are so many factors to be taken into account when considering laundry economy for institutions that no single one can be isolated from the others but every one must be carefully taken into account so that only satisfactory results are obtained.

Continued from Page 35

reception room, sitting room and nineteen bedrooms. The second floor will have similar bath and toilet accommodation as that of the first floor, one double room and twenty-one single rooms.

* * *

VULCAN, ALTA.—Vulcan's new $40,000 hospital is now opened and filled to capacity. The hospital has sixteen beds and six more are to be added in the near future. The hospital was built as a co-operative scheme by the town and district. The assessment on farm lands is three cents an acre and town supporters pay on the basis of $6 per year.

* * *

WINDSOR, ONT.—Announcement has been made of the proposed construction of a $1,500,000 Catholic institution in South Windsor. It will be known as the Villa Maria and will be located near the St. Mary's Academy now being constructed in South Windsor. The new institution will include a home, chapel, hospital and other facilities for the care of the aged and orphans of Essex County. It will have accommodation for 400 persons and will be in charge of the Sisters of St. Joseph's.

Do you know why you must cover up when you lie down? It is because it takes less muscle activity to maintain a recumbent position than a standing position and therefore less heat is produced in the body.

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With the Manufacturers

An Effective Bumper

Recently a new hospital bed bumper was placed on the market which is said to be a vast improvement over the old style bumper and which embodies a number of new features. In shape the bumper is similar to a doughnut, and is designed for square, round or grace line tubing on hospital beds. The bumper is split so that it may be applied at any desired point without having to remove the casters. Imbedded in the bumper is a split steel ring with an adjustment screw so that it can be securely anchored in any position. The pumpers have proved effective in protecting beds, doorways, walls and baseboards from damage when it became necessary to move the beds, or when the beds were accidentally jarred.

A New Hot Water Bottle

Hospital executives are always on the lookout for any sort of equipment which will add to the efficiency of the hospital or increase the comfort of the patient, so the new water bottle which is being placed upon the market by the Seiberling Rubber Co., of Canada, Limited, should prove of much interest in this field.

This is a bottle which makes available much

The New Seiberling Bottle

greater heat than was ever possible with the old-fashioned, smooth-surface water bottle and requires no towels or other protection against skin burn. This is made possible because the surface of the bottle is studded with thermo-nubs, made like a

rubber massage brush. This studded surface forms an air cushion and permits the use of water as hot as it can be procured; even with boiling water, it is claimed that it is unnecessary to wrap "Non-Burn" in a towel for protection.

Naturally the heat is available for a longer period since so much hotter water may be used in the first place, and another advantage is that, because of the thermo-nubs, the bottle clings to curved surfaces without being held in place.

For invalids and hospital use Non-Burn bottles are made with the thermo-nubs on both sides so that even a very restless patient is in no danger of being burned.

Frigidaire Automatic Refrigeration

In hospitals, clinics and sanitariums, the restoration of health is of first consideration, and therefore the proper protection of all foods is of vital importance. Medicines, serums, vaccines and other biological products also must be carefully safeguarded.

For these reasons, it is necessary that the refrigeration equipment of such institutions maintain temperatures of a constancy and correctness much more exacting than is usually required.

Many hospitals to-day are using automatic refrigeration for all their refrigeration requirements because it provides, without attention, day in, day out, a dry cold atmosphere—at temperatures far below the point where bacterial growth flourishes—and temperatures ideal for the safe-keeping of food.

Automatic refrigeration has also been found invaluable by physicians in experimental work. In this connection a well-known doctor writes:

"Some years ago I recommended Frigidaire automatic refrigeration to physicians for use in their laboratories to carry out serological reactions.

"Fixation at a low temperature has revolutionized the technique of the well-known Wasserman reaction, and I am pleased to state that the original experiments have been carried out and resulted in making this improved test available for office practice.

"In addition to the preservation of serums, vaccines, and other biological products, I have found Frigidaire automatic refrigeration ideal for the storing of enzyme mixtures, body fluids, chemical reaction mixtures, colloid solutions and other mixtures which decompose at ordinary temperatures."

Continued from Page 16

of 159, an interne staff of twelve members, and with competently administered departments in all branches of medical science.

The Medical School of the University of Western Ontario and the Institute of Public Health, housing the Faculty of Public Health, are in the same block as the hospital. The institution is used as a teaching unit of the Medical School, and the laboratories of both the Medical School and the Institute of Public Health are at the disposal of the hospital. These laboratories, together with a well-equipped biochemistry laboratory centrally located in the hospital, furnish every facility for laboratory work.

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AZNOE'S MISCELLANEOUS CALLS: (a) Male Technician' college degree, capable of handling lecture work and student contacts in high-grade laboratory school, $150 first year—guaranteed increase. (b) Night Supervisor, 50-bed general hospital, no wards, Greater New York. New York registration unnecessary, $100. (c) Instructor for small Massachusetts training school, $100. (d) Assistant Superintendent, over 28, for 50-bed general hospital, Vermont. Executive ability essential. No. 2211, Aznoe's Central Registry for Nurses, 30 North Michigan Avenue, Chicago, Illinois.

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Catholic Hospital Asssociation Have Practical Convention Program Arranged

The fourteenth annual convention and the third annual clinical congress, Catholic Hospital Association, will be held at the Stevens Hotel, Chicago, Ill., May 6 to 10. Very special efforts are being made to have a programme such as will set forth to the delegates and visitors the theory and practice of what is best in the hospital life of to-day.

In the preparation of this programme the co-operation of all allied organizations has been enlisted. In addition, the assistance and active interest of all hospital superintendents in and around Chicago have been secured. The officers of the association are arranging the programme from the recommendations of the hospital superintendents, which means that the delegates will have scheduled for them discussions and demonstrations of their own choice. This should make the programme very interesting, instructive and practical, not only for general but for specific application.

Included in the programme will be topics of interest for the doctor, nurse, advisory board member, and laymen and women, since their relationship to the hospital is so close that, for the hospital's success, a definite knowledge of hospital work and its progress becomes a distinct part of their equipment.

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enables the hospital to identify babies in a modern and pleasing manner. Letter beads to form name are strung onto a handsome blue necklace, which is SEALED ON BABY'S NECK AT BIRTH. Sanitary, Rapid, Non-irritating, Fool-proof. Nurses like it. It relieves them of all responsibility of a mix-up. Mothers are delighted with it. *"A positive identification of the new-born."*

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Prices:
Coat .....$28.00 doz.
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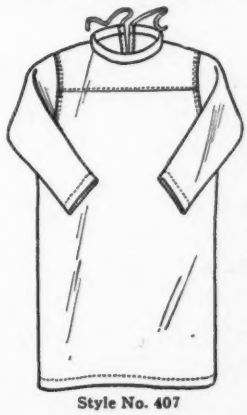

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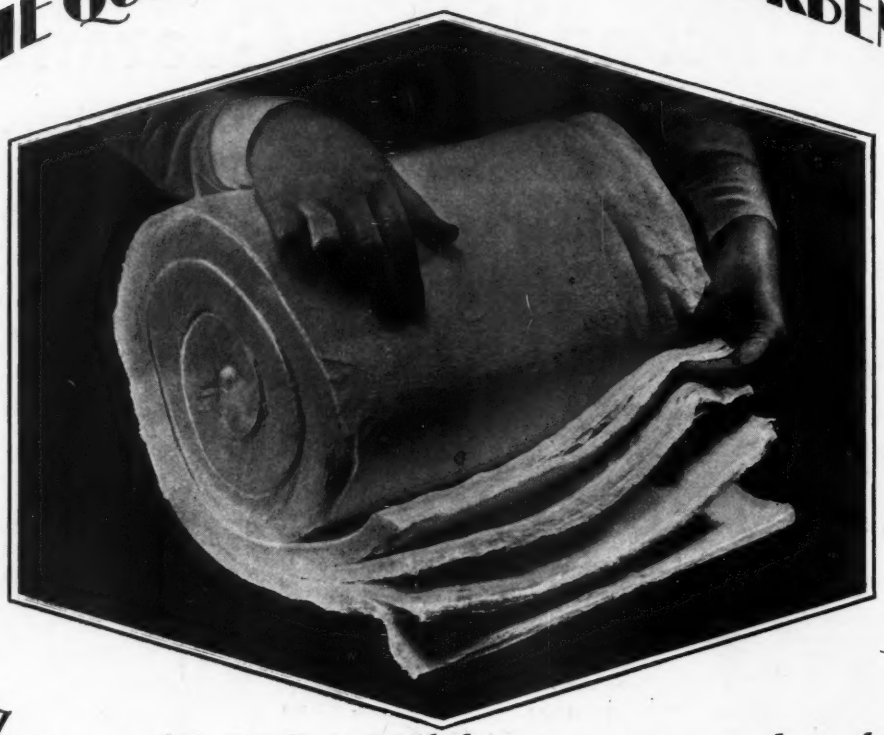

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